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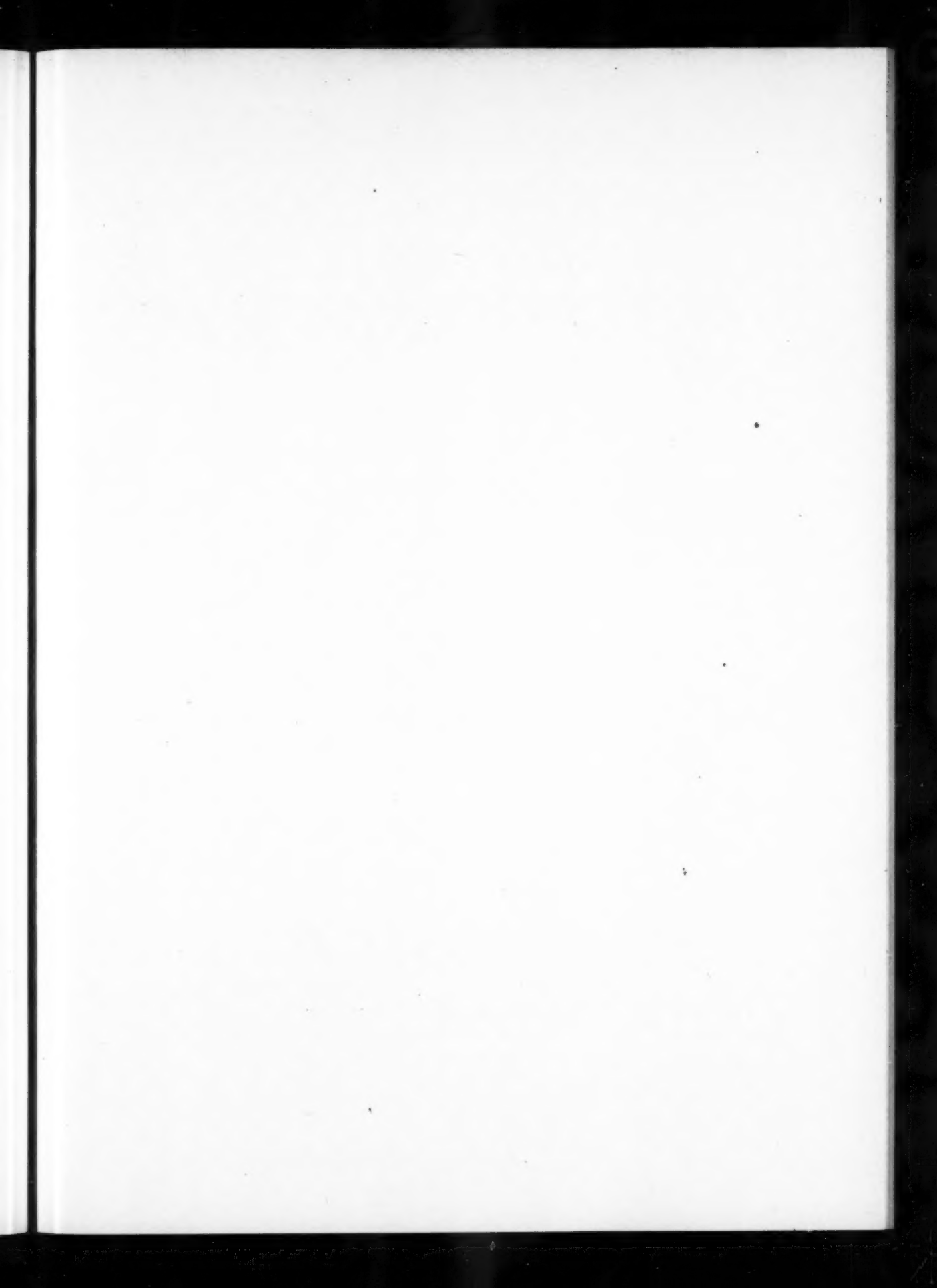
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## EDITORIAL ANNOUNCEMENT

With this number the JOURNAL enters the Archaeological field with a new format and a new Editor. In assuming the task we wish to express our appreciation of the wise management of the publication under the retiring Editor, of the high standards maintained and of the fine achievement which has resulted. For the past seven years Professor Elderkin has devoted much of his time to the continued development of a scientific JOURNAL. The high estimation in which the periodical has been held is the measure of his attainment. We wish for him equal success as Director of excavations at Antioch.

The new format, except for minor details of arrangement, is the work of the retiring Editors, Professor Elderkin, Editor-in-Chief and Mrs. Elderkin, Editor of Book Reviews. We are indebted to them not only for the format but also for constant help and advice and for a standard of accuracy which it is hoped will be maintained. The increased size of the volume will allow for Plates worthy of the articles submitted and will make the JOURNAL comparable in this respect with leading archaeological publications.



## CAPE COLIAS PHALERUM AND THE PHALERIC WALL

EVERY scholar who is interested in the problems concerning the topography of Athens will welcome the appearance of the second edition of Professor Walther Judeich's *Topographie von Athen* in Iwan von Müller's *Handbuch der Altertumswissenschaft* (III, 2, 2, Munich, 1931). It is the standard work and indispensable for any scientific investigation in this field. The present writer would like to acknowledge many pleasant and profitable hours spent in and about Athens with the first edition of this book as his companion. It is, therefore, with great appreciation of Professor Judeich's position in this field of investigation that the following communication is submitted.

On p. 428 f. Judeich has discussed the problem of the location of Phalerum and the Phaleric Wall, making certain changes from the view presented in the first edition and adding a criticism of the views advanced in my article in the *Transactions of the American Philological Association* (LIX (1928), pp. 164 ff.). I wish here to consider the altered view and the criticism.

The first criticism strikes at a vital point, which deserves more detailed consideration than I have devoted to it in my article. I refer to the problem of the location of Cape Colias. Inasmuch as it is generally accepted that Cape Colias was in the deme of Halimus, I shall not discuss that point in this place.<sup>1</sup> It will be of value, however, to review the evidence for the location of the deme. First, Strabo informs us that Halimus was the neighboring coastal deme to the east of Phalerum.<sup>2</sup> Second, Demosthenes (LVII, 10) states that the deme was 35 stadia distant from Athens. Third, Pausanias (I, 1, 5) states that Colias (not the deme of Halimus as stated by Judeich, *Topographie* <sup>2</sup>, p. 173, note 2) was 20 stadia removed from Phalerum. Now, Judeich asserts that the distances and evidence given fit only St. George.<sup>3</sup> The distances which Judeich states, are, however, quite inaccurate. Phalerum, when placed at St. Savior, where Judeich places it, would be only about 14 stadia from Colias if the cape should be placed at St. George where Judeich locates Colias.<sup>4</sup> Furthermore, he has given the distance from Athens to Halimus—as he locates that deme—inaccurately. If Halimus included Trispyrgi and St. George, it could not be 35 stadia removed from the city for, by measuring from the Itonian Gate to a point on the coast somewhat southeast of Trispyrgi, the distance obtained is little more than 32 stadia. With the deme boundary moved far enough to the north to include St. George the distance would be about 28 stadia. It is, thus, apparent that, on these grounds alone, one should view with suspicion any attempt to extend the boundary of Halimus to include St. George. But, more definite evidence concerning the location of the deme has recently become available. A few years ago a decree of the deme of Halimus was found *in situ* near the modern farmstead of Chasani.<sup>5</sup> This fact coupled with the finding of numerous ancient

<sup>1</sup> Judeich, *Topographie* <sup>2</sup>, p. 173, note 2, and the literature there cited. This paper was written during the period of the author's tenure of a Sterling (Research) Fellowship in Yale University.

<sup>2</sup> Strabo, IX, 398; cf. Paus. I, 31, 1.

<sup>3</sup> *Op. cit.*, p. 173, note 2.

<sup>4</sup> Judeich, *loc. cit.*

<sup>5</sup> Hondius, *B.S.A.* XXIV (1919-1921), pp. 151 ff.

remains in the vicinity<sup>1</sup> and the finding, also in the same vicinity, of a grave inscription of a man registered in the deme of Halimus,<sup>2</sup> would seem to prove that the central point of the deme was near Chasani. The northern limit of the deme may perhaps be sought near Trachones, where two tickets of jurymen registered in Halimus were found.<sup>3</sup> Trachones is about 34 stadia removed from Athens. With the northern and southern boundaries of the deme known (*viz.* Trachones and the sea) and no secure data for the eastern boundary, we can still be fairly certain that, in view of the fact that Halimus was one of the smallest Attic demes,<sup>4</sup> the deme could not, with any probability, have extended so far to the west as to have included St. George.

With Halimus thus located Colias would have to be placed at the modern Cape Cosmas. How does this agree with our evidence from ancient authors in other respects? Several writers inform us that the wrecks of the Persian ships were washed up on the shore at Cape Colias after the Battle of Salamis.<sup>5</sup> Herodotus states that they were carried there by a west wind.<sup>6</sup> A glance at the map is sufficient to show that such a wind would have carried the wreckage on a course somewhat south of the Piraeus and to Cape Cosmas rather than St. George.<sup>7</sup> Cape Cosmas is a matter of concern to mariners today because of the danger of running aground there. *The Mediterranean Pilot* (Vol. 4, p. 114, 2d ed., 1925, U. S. Hydrographic Office) reads as follows: "Vessels cruising along this shore should give it a wide berth, and pay attention to the lead." In another respect we may see that Cape Cosmas fits as the site of Cape Colias. The latter was noted for its pottery in ancient times.<sup>8</sup> It so happens that the clay at Cape Cosmas is of excellent quality and adapted to the manufacture of pottery. Incidentally, the clay at Trispyrgi is quite sandy and not suitable for use as a ceramic material.<sup>9</sup> It has at times been asserted that Colias could not have been at Cape Cosmas because the latter could not be considered an *ἄκρα*, which was the characterization used by Pausanias (I, 1, 5) for Colias. Before discussing the meaning of this word, let us take notice of a passage from Herodotus (VIII, 96): τῶν δὲ ναηγίων πολλά ὑπολαβὼν ἄνεμος ζέφυρος ἔφερε τῆς Ἀττικῆς ἐπὶ τὴν ἡϊόνα καλομένην Κωλιάδα. Now, an ἡϊὼν is a beach or a strand and would seem not to refer to a high headland. In the present passage it almost certainly refers to a low cape projecting out into the sea.<sup>10</sup> *ἄκρα* has the meaning of the highest or farthest point, a cape or a headland.<sup>11</sup> By taking the meaning "cape" the Pausanias passage may be reconciled with that of Herodotus. Now that the probability is established that Colias was a low-lying cape, Cape Cosmas may be seen to be a suitable location for Colias. In any case, it would be difficult to under-

<sup>1</sup> Frazer, *Pausanias' Description of Greece*, II, pp. 398 ff.; Hondius, *loc. cit.*

<sup>2</sup> *I.G.* II, 1807; cf. Milchhoefer, *Ath. Mitt.* XIII (1888), p. 359.

<sup>3</sup> *I.G.* II, 892 and 906; cf. Frazer, *loc. cit.*

<sup>4</sup> Demosth. LVII, 10; cf. Haussoulie, *La Vie Municipale*, p. 44.

<sup>5</sup> Herodot. VIII, 96; Strabo, IX, 398; Paus. I, 1, 5. At this point we should observe that Strabo's authority in placing Cape Colias near Anaphlystus should be discounted. See Weller, *Class. Phil.* I (1906), p. 353, and *A.J.A.* VII (1903), p. 286.

<sup>6</sup> VIII, 96.

<sup>7</sup> Cf. How and Wells, *Commentary to Herodotus*, VIII, 96.

<sup>8</sup> Athen. XI, 482b; Steph. Byz. *s.v.* Κωλιάδος Κεραμῆς.

<sup>9</sup> Kastromenos, *Arch. Eph.* 1897, pp. 93-96.

<sup>10</sup> Liddell and Scott, *Greek-English Lexicon*, ed. 9, *s.v.*

<sup>11</sup> Liddell and Scott, *op. cit.* *s.v.*



stand how the *ἡϊών* of Herodotus could be applied to Trispyrgi.<sup>1</sup> My location of Cape Colias at Cape Cosmas does full justice to all of our evidence with the exception of one passage. Pausanias (I, 1, 5) informs us that Colias was 20 stadia removed from Phalerum. A point near St. George, where I would place Phalerum, is a little less than 27 stadia distant from Cape Cosmas. At any rate, it is apparent that the problem of the location of Colias is intimately connected with that of the location of Phalerum and the Phaleric Wall. Obviously, then, the location to be preferred is the one which does the least violence to our evidence from ancient authors with regard to the complex problem of the location of Phalerum, the Phaleric Wall, and Cape Colias. For the present, let us bear in mind that Cape Cosmas, in all respects but one, conforms to our evidence and that St. George does not satisfy any of the evidence.

Let us now survey briefly the evidence for the location of Phalerum. Strabo (IX, 398) informs us that it was the neighboring coastal deme to the east of the Piraeus. In addition to the fact that the port of Athens was at Phalerum before the time of Themistocles, there is other evidence that Phalerum was on the coast.<sup>2</sup> Pausanias writes that at Phalerum the sea approached closest to Athens.<sup>3</sup> Thucydides (I, 107, 1): *Ἦρξαντο . . . τὰ μακρὰ τεῖχη Ἀθηναῖοι ἐς Θάλασσαν οἰκοδομεῖν, τό τε Φάληρόνδε καὶ τὸ ἐς Πειραιᾶ* shows Phalerum to have been on the coast. Now, Judeich adheres to the position that St. Savior was the site of Phalerum.<sup>4</sup> This would require an elevation of the coast line since classical times, since St. Savior is now quite some distance inland, and involves a scientific problem. Judeich's authority in assuming this elevation is a classical scholar, Milchhoefer, who did not pretend to make a thorough investigation of the coast line from the point of view of a scientist. Indeed, Milchhoefer states very clearly that he considers the elevation of the coast line since classical times a "Möglichkeit."<sup>5</sup> Against this authority we may range that of Negris, who investigated the coast line from the point of view of a scientist and an engineer. He came to the conclusion that the coast line of the Phaleric Bay has sunk since ancient times.<sup>6</sup> At this point let me observe that Judeich imputes to me an argument which I did not offer. He writes (p. 428): "Willkürlich ist ferner das Bedenken gegen ein tieferes Einschneiden der Phaleronbucht im frühen Altertum wegen der schon länger beobachteten Senkung der Küste." As a matter of fact, I wrote (p. 166, note 13) the following statements: "This is summoning probability to the aid of a thesis. The burden of the proof rests with him [Milchhoefer]. In this connection it is interesting to note that at least one scholar has assumed that exactly the opposite has happened: that the coast line has subsided since ancient times, bringing Athens closer to the sea." My position

<sup>1</sup> The scholiast to Paus. I, 1, 5, employs the word *ἀκτὴ* in describing Colias. This word, too, according to Liddell and Scott, may have the significance of cape or any point projecting farther than others. Steph. Byz. *s.v.* Κωλιάς, in placing Colias at Phalerum, would seem to contradict Paus. I, 1, 5, in which case the authority of the periegete should prevail.

<sup>2</sup> Herodot. VI, 116; Diod. XI, 41; Nepos, *Them.* 6; Paus. I, 1, 2; cf. Day, *op. cit.* pp. 164-165.

<sup>3</sup> I, 1, 2; cf. VIII, 10, 4.

<sup>4</sup> Judeich, *op. cit.* p. 169, note 2.

<sup>5</sup> Milchhoefer, *Karten von Attika*, Text, II, p. 2; cf. I, p. 24; Ulrichs, *Reisen und Forschungen*, II, p. 160.

<sup>6</sup> Negris, *Ath. Mitt.* XXIX (1904), pp. 348 ff.; cf. von Gerkan, *Griechische Städteanlagen*, p. 55.

is merely that, *in the absence of proof to the contrary*, one has no right to assume that such a great change has occurred in the coast line as to place St. Savior as far inland as it is to-day. The reason for the cautious statement in my article was that Negris has not established a definite date for the sinking of the coast line of the Phaleric Bay. The fact remains that the only scientific investigation of the subject has failed in the attempt to give us definite evidence—or even probable evidence—concerning the state of the coast line in classical times. Logical procedure, therefore, demands that discussion proceed on the assumption of a coast line approximating the one existing today. It is interesting, however, that Judeich is placed in the position of asserting that the coast line has been elevated since the time of Pausanias (Phalerum was still a port in his time) and later subsided.<sup>1</sup>

We must now consider the location of Phalerum with respect to Athens. Pausanias (I, 1, 2) informs us that at Phalerum the sea approached closest to Athens: Φάληρον δέ—ταύτη γὰρ ἐλάχιστον ἀπέχει τῆς πόλεως ἢ θάλασσα—, τοῦτό σφισιν ἐπίνειον ἦν, κτλ. In another passage (VIII, 10, 4) he states that the sea was about 20 stadia removed from the city at that place: Ἀθηναίους μὲν δὴ σταδίων μάλιστα ἔκοσιν ἀφέστηκε τῆς πόλεως ἢ πρὸς Φαλήρω θάλασσα. I interpret μάλιστα as “about.”<sup>2</sup> Phalerum was situated, then, about 20 stadia from Athens. In my article cited above (p. 166) I have stated that St. George was about 20 stadia removed from Athens. A reference to p. 165 of the same article will show that I placed Phalerum at a point *near* St. George. On p. 166 the word “near” is omitted in the table for the sake of economy of space. Judeich has asserted that this measurement was “geradezu unrichtig” and has given a different figure. I wish to emphasize in this place that a measurement from the nearest point on the wall of Athens—the southwestern corner of the Hill of the Muses—to the point marked “Georgios” on Bl. III of the *Karten von Attika* affords a figure of no more than 23.5 stadia. Now, I was careful to specify that I was measuring to a point *near* St. George for I was placing Phalerum *near*, not *at* St. George. Furthermore, I wished to allow a certain territorial extent for the port town of Phalerum. Making this allowance the distance would be considerably under 23 stadia, or, as I have asserted, a little more than 20 stadia.

Inasmuch as there is disagreement between Professor Judeich's figures and mine, it will be profitable to consider the units of measurement which each of us has employed. Judeich has employed a “Schrittstadion” of 164 m. in the measurement of the Long Walls and the circuit wall of the Piraeus.<sup>3</sup> I shall restate in this place the argument which he offers to prove that Thucydides employed a stadium of 164 m. The Long Walls, according to Kaupert,<sup>4</sup> were 6610 m. and 6620 m. respectively in length. On the basis of a “Schrittstadion” of 164 m. the length of these walls would be 40.304 and 40.36 stadia, which closely approximates the 40 stadia specified by Thucydides (II, 13, 7). In the case of the circuit of the Piraeus, the wall (it is chiefly Canon's wall which is now extant) with the faces of the towers

<sup>1</sup> Paus. I, 1, 4; cf. Day, *op. cit.* p. 176, note 51.

<sup>2</sup> Kühner-Gerth, *Ausführliche Grammatik der Griechischen Sprache*, II, 1, ed. 3, p. 315, 15. In some cases—to be determined by the context—it may mean “at most,” p. 169, note 1.

<sup>3</sup> Judeich, *op. cit.* pp. 131, 145, and 157.

<sup>4</sup> *Monatsber. d. Berl. Akad.* 1879, p. 634.

measured in is 12,665 m. in length. Judeich would add to this the length of the moles of the large harbor and assume a total length of about 13 km. On the basis of a "Schrittstadion" of 164 m. the wall would have been about 79 stadia in length, which would closely approximate the 80 stadia which Aristodemus (V, 4) gives for its length, but disagree greatly with the 60 stadia given by Thucydides.<sup>1</sup> By employing a stadium of 177.6 m. the length would be about 73 stadia. With a stadium of 184 m. it would be about 70. Consequently, Thucydides' figures, Judeich argues, must have been improperly handed down in the manuscripts, or the Themistoclean Wall must have followed a course different from that of Conon. Judeich has accepted the latter alternative and has evolved a theory concerning the course of the Themistoclean Wall.<sup>2</sup> Despite the vital criticisms of Noack<sup>3</sup> he has retained the theory in the second edition of his book, apparently, however, with a certain diminution of assurance. These are the grounds upon which Judeich assumes that Thucydides employed a stadium of 164 m., at least in the case of the Long Walls and the Piraeus Wall. I believe, however, that this assumption is invalid. The measurements given for the Long Walls were in a "glatter Linie," whereas, in the case of the Piraeus Wall, the measurement included three faces of the "Tortürme."<sup>4</sup> In the latter case the length was 12,665 m., but Judeich wished to add the length of the "Hafenschenkeldmauern bis zur Sperre des Haupthafens" and assumed a length, accordingly, of about 13 km. There is, however, no defensible reason for including the length of the harbor moles of the large harbor in the length of the wall. Furthermore, it would be an extraordinary procedure to include the measurement of three faces of towers in the length of a wall. At any rate, it is obvious that the method of measurement must be the same in the case of each wall—*i.e.* with the towers included or not included in all cases. Another point is, of course, obvious, namely that Thucydides employed the same unit of measurement in the case of all three walls inasmuch as the three measurements are given within the same sentence.<sup>5</sup> Despite the improbability of the inclusion of three faces of towers in the measurements, let us observe the resulting number of stadia in the instance of the employment of the three most likely standards.<sup>6</sup>

<sup>1</sup> Judeich, *op. cit.* pp. 145.

<sup>2</sup> Judeich, *op. cit.* pp. 145 ff.

<sup>3</sup> *Ath. Mitt.* XXXIII (1908), pp. 33 ff.

<sup>4</sup> Judeich, *op. cit.* pp. 145 and 157.

Thucyd. II, 13, 7.

<sup>6</sup> The lengths of walls given are taken from Kaupert, *loc. cit.* The lengths of the stadia which I have employed differ from those used by Judeich. I have taken my figures from Pauly-Wissowa-Kroll, *Realencyclopädie*, VI, 2d series, *s.v.* Stadion, 1902. I believe that these measurements are corrections of the older ones adopted by Judeich, but I am not positive that his "Schrittstadion" of 164 m. should be equated with the so-called ninth-of-a-mile stadium of 165.39 m. For the sake of completeness I shall tabulate here the number of stadia which would result from the adoption of lengths such as those employed by Judeich. With the towers included:

Wall	Length	164 m.	177.6 m.	184 m.	Thucyd.
North Wall . . . . .	7,282 m.	44.402	41.002	39.57	40
South Wall . . . . .	7,312 m.	44.58	41.17	39.73	40
Piraeus Wall . . . . .	12,665 m.	77.22	71.31	68.83	60

All measurements are stadia unless otherwise specified.

With merely the straight line of the walls measured:

	<i>Length</i>	<i>165.39 m.</i>	<i>178.62 m.</i>	<i>186.03 m.</i>	<i>Thucyd.</i>
Piraeus Wall.....	12,665 m.	76.57	70.904	68.07	60
North Wall.....	7,282 m.	44.02	40.76	39.14	40
South Wall.....	7,312 m.	44.21	40.93	39.305	40

All numbers are stadia unless otherwise specified.

A tabulation, with merely the straight line of the walls measured, would afford the following results:

	<i>Length</i>	<i>165.39 m.</i>	<i>178.62 m.</i>	<i>186.03 m.</i>	<i>Thucyd.</i>
Piraeus Wall.....	11,045 m.	66.78	61.83	59.37	60
North Wall.....	6,610 m.	39.96	37.005	35.53	40
South Wall.....	6,620 m.	40.02	37.06	35.58	40

All numbers are stadia unless otherwise specified.

An inspection of the statistics thus obtained shows several facts. In the case of the measurements taken with inclusion of the faces of the towers, we find that, by adopting a stadium of 165.39 m., we are compelled to discount Thucydides' authority for the length of the three walls. (My procedure is to assume that the Themistoclean Wall of the Piraeus followed the course of that of Conon until—if ever—a solution, on such a basis, of the complex problem becomes manifestly impossible.) In the case of adoption of stadia of 178.62 m. or 186.03 m. the length of the Long Walls given by Thucydides is approximated, but the length of the Piraeus wall is 8–10 stadia too long. When we come to the measurements wherein the towers were not included we ascertain that, by adopting a stadium of 165.39 m., the length of the Long Walls is closely approximated, but that the length of the Piraeus wall is almost 7 stadia too great. By adopting a stadium of 186.03 m. the length of the Piraeus wall is closely approximated, but the variation in the case of the Long Walls is almost 4.5 stadia. If a stadium of 178.62 m. should be employed, the number of stadia for the Piraeus circuit would be 1.83 too large; that for the Long Walls almost 3 too small. When, however, we take into consideration the fact that the figures given by Thucydides are obviously round numbers, the close approximation of all the lengths to the Thucydidean numbers, when a stadium of 178.62 m. is employed, indicates the probability that the historian used a stadium of that length (or, perhaps, that length slightly modified) in his description of the walls of Athens and the Piraeus, and the Long Walls. In any case, it is extremely improbable that he employed a stadium of 164 m. or 165.39 m. By adopting this view we avoid the necessity of throwing overboard Thucydides' authority for the length of the Piraeus Wall, as well as the incentive to adopt the very questionable theory propounded by Judeich, that the Themistoclean Wall of the Piraeus followed a course which was radically different from that of the wall of Conon. It is obviously the proper course to avoid, as often as possible, doing violence to our authorities.<sup>1</sup> As for the length of the stadium employed by Pausanias, we cannot be

<i>Wall</i>	<i>Length</i>	<i>164 m.</i>	<i>177.6 m.</i>	<i>184 m.</i>	<i>Thucyd.</i>
North Wall.....	6,610 m.	40.304	37.21	35.92	40
South Wall.....	6,620 m.	40.36	37.27	35.97	40
Piraeus Wall.....	11,045 m.	67.34	62.19	60.027	60

All numbers are stadia unless otherwise specified.

<sup>1</sup> Dörpfeld, *Ath. Mitt.* XV (1890), p. 186, states that all Greek writers from Herodotus to Eratosthenes employed an Aeginetan-Attic stadium of 164 m. He has quoted (p. 177), apparently in substantiation of this statement, Hultsch, *Griech. und Röm. Metrologie*<sup>2</sup>, p. 54, where it is stated that Herodotus used a stadium of 160 m., Xenophon one of 150 m., and Eratosthenes one of 157.5 m. This is, however, proof only that there was a variation between Greek writers in the matter of the length



certain. It would, of course, be extremely precarious to argue that it was the same as that of Thucydides. According to Dörpfeld<sup>1</sup> a stadium of 178 m. was used in Athens in Roman times. I have followed him by employing this unit of measurement in calculating the distances given by Pausanias.<sup>2</sup>

With regard to the location of Phalerum in relation to Cape Colias we have already seen that Phalerum near St. George would be about 27 stadia from Colias at Cape Cosmas. This would represent 7 more stadia than specified by Pausanias (I, 1, 2). But, Colias, if not located at Cape Cosmas, must be placed at Trispyrgi. Phalerum at St. Savior would be only about 14 stadia removed from Cape Colias at Trispyrgi. Consequently, the variation from Pausanias' specification is practically the same in either instance. Evidently the situation to be preferred is the one which agrees best with our authorities in the solution of the complex Colias-Phalerum-Phaleric Wall problem as an entity.

The problem of the location of Phalerum is closely connected with that of the course of the Phaleric Wall. Although I have discussed this question fully in my article cited above, I wish to set forth briefly the most important evidence from ancient authors in order to show just how much of it is accepted by Judeich in the revised solution set forth in the second edition of his *Topographie von Athen* (p. 429). In this solution Judeich maintains that the original course of the wall may have been changed before the time of Thucydides so that, in the time of the historian, the part of the wall between St. Savior and the Piraeus was assimilated to the South Wall. In this way he would attempt to justify the name of the wall and to make the length conform to the 35 stadia specified by Thucydides and the papyrus from Hawara. Now, most of our information concerning the course of the wall is derived from Thucydides. I shall set down two passages written by him so that we may recur to them in the course of the discussion. Thucydides (I, 107, 1): ἤρξαντο δὲ κατὰ τοὺς χρόνους τούτους καὶ τὰ μακρὰ τεῖχη Ἀθηναῖοι ἐς θάλασσαν οἰκοδομεῖν, τό τε Φάληρόνδῃ καὶ τὸ ἐς Πειραιᾶ. Thucydides (II, 13, 7): τοῦ τε γὰρ Φαληρικοῦ τείχους στάδιοι ἦσαν πέντε καὶ τριάκοντα πρὸς τὸν κύκλον τοῦ ἄστεως καὶ αὐτοῦ τοῦ κύκλου τὸ φυλασσόμενον τρεῖς καὶ

of stadium employed. Hultsch, elsewhere (p. 69 and note 2), assumes that Thucydides used an Attic stadium of 185 m. Cf. C. Müller, *Frag. Hist. Gr.* V, 1, p. 8 f. Notice, however, in addition to the statistics in the text, the following cases. Thucydides (VII, 19, 2) states that Crommyon was about 120 stadia removed from Corinth. The distance from Corinth to Crommyon is thirteen and one-half miles. Cf. Frazer, *op. cit.* III, p. 3. The following numbers of stadia result from the employment of the three lengths of stadia used in the text:

165.39 m.	178.62 m.	186.03 m.
131.205	121.43	116.64

In another passage Thucydides states (IV, 3) that Pylos was about 400 stadia removed from Sparta. Frazer (*op. cit.* III, p. 457. He adopts a stadium of 177.42 m. Cf. II, p. 13.) states that the distance is exact. A checking, wherever sufficient data exists, of other passages in Thucydides where distances are given will serve to corroborate further the fact that the historian used a stadium of 178.62 m., or one approximating it. As for our consequent rejection of the figures given by Aristodemus (V, 4) for the length of the Piraeus wall, there is no reason to believe that Thucydides' authority is not to be preferred to his. In the case of the city walls, Thucydides has obviously made a great mistake, or his figures have not been properly handed down in the Mss.

<sup>1</sup> *Loc. cit.*

<sup>2</sup> However, the so-called *Stadium Italicum* of 186.03 m. seems to have been employed in a modified length—184.96 m.—in the Stadium at Athens. Pauly-Wissowa-Kroll, VI, 2d series, 1969.

τεσσαράκοντα· ἔστι δὲ αὐτοῦ ὁ καὶ ἀφύλακτον ἦν, τὸ μεταξὺ τοῦ τε μακροῦ καὶ τοῦ Φαληρικοῦ· τὰ δὲ μακρὰ τεῖχη πρὸς τὸν Πειραιᾶ τεσσαράκοντα σταδίων, ὧν τὸ ἕξωθεν ἐτηρεῖτο. Now the first passage belongs to a description of the events of 457 B.C. and explicitly treats the *beginning* of the building of the Long Walls, one of which was the Phaleric Wall, although Thucydides does not there specifically apply that name to it. Inasmuch as he was born at some time between 460 and 452 B.C. there seems to be no reason to doubt that his information concerning the first course of the Phaleric Wall was reliable.<sup>1</sup> When, therefore, Judeich states that the course of the Phaleric Wall had, by Thucydides' time, been altered, he must have had in mind the second passage quoted above. One should not necessarily infer from Thucydides that the course of the wall was not altered between 457 and 431 B.C. In a passage (I, 108, 3) describing the events of a period shortly after 457 B.C. the historian informs us that the Long Walls had been completed. In the first passage quoted above only two Long Walls were mentioned whereas, in the second which describes the events of 431 B.C. (II, 13, 7), three are mentioned. Thucydides, therefore, neglected to mention the building of the *διὰ μέσου τεῖχος*.<sup>2</sup> He may well, then, have also neglected to mention the alteration of the course of one of the original walls. But the altered course of the wall, as proposed by Judeich, very definitely implies (Judeich's words imply it as well) that it ran, in its original course, to the Piraeus. This can hardly be true. In the first passage notice especially: τὰ μακρὰ τεῖχη Ἀθηναῖοι ἐς θάλασσαν οἰκοδομεῖν, τό τε Φάληρόνδε καὶ τὸ ἐς Πειραιᾶ. Wilcken<sup>3</sup> has rightly called attention to the fact that Thucydides would not have written τό τε Φάληρόνδε καὶ τὸ ἐς Πειραιᾶ if he had not been closely differentiating between the terminals of the two walls. In addition, the contrast, in the second passage quoted above, between τοῦ τε γὰρ Φαληρικοῦ τεύχους στάδιοι ἦσαν πέντε καὶ τριάκοντα πρὸς τὸν κύκλον τοῦ ἄστεως and τὰ δὲ μακρὰ τεῖχη πρὸς τὸν Πειραιᾶ τεσσαράκοντα σταδίων is a strong indication that the Phaleric Wall did not run to the Piraeus. Furthermore, it is to be greatly doubted that the suffix -δε, which has the significance of *to* or *toward*, would have been used in τό τε Φάληρόνδε if the wall had passed on through Phalerum to join the South Wall.<sup>4</sup> As far as the length of the wall is concerned, Judeich's revised course satisfies the 35 stadia given in the second passage quoted above. In other respects, however, he has misinterpreted that passage. According to Thucydides the following walls were to be defended:

I. Phaleric Wall . . . . .	35 stadia
II. Outer wall (North Wall) to the Piraeus . . . . .	40 stadia
III. Half of the Piraeus circuit . . . . .	30 stadia
IV. City wall, excepting part between Phaleric and North Wall . . . . .	43 stadia

In accordance with the present writer's solution, the tabulation thus given renders account of the total amount of wall to be defended in order to secure the complete defense contemplated by Pericles. But, Judeich has assumed that this passage demands an absolutely closed circuit.<sup>5</sup> If this were true, the following walls would have had to be defended:

<sup>1</sup> Schmid-Stählin, *Gesch. d. griech. Literatur*\*, p. 480.

<sup>2</sup> Judeich, *op. cit.* p. 157.

<sup>3</sup> "Die Attische Periegese von Hawara" in *Genethliakon für C. Robert*, p. 211.

<sup>4</sup> Kühner-Gerth, *op. cit.* II, p. 312, note 8.

<sup>5</sup> Judeich, *op. cit.* p. 158.



I. Phaleric Wall.....	35 stadia
II. North Wall.....	40 stadia
III. The entire Piraeus circuit.....	60 stadia
IV. City wall, excepting part between Phaleric and North Wall.....	43 stadia
V. Part of South Wall between the Piraeus circuit and the juncture with the Phaleric Wall somewhere southwest of St. Savior.....	10-15 stadia (?)

In items III and V, consequently, Judeich has rejected the account given by Thucydides. In the case of III, his demand that the circuit be entirely closed leads to the rejection of the historian's specification that only half of the Piraeus Wall was to be guarded. In the case of V, Judeich's solution rejects the specification, given by Thucydides, that only the *outer* wall to the Piraeus was to be guarded. If the part of the South Wall between the Piraeus Wall and the juncture with the Phaleric Wall (as proposed by Judeich) were not guarded, the circuit on land would certainly not be closed. How, then, can Judeich write (p. 429) that his revised course for the wall does justice to Thucydides (II, 13, 7)? Finally, in one more respect Judeich's theory fails. We have already seen that Phalerum was on the coast. But, Phalerum, when placed at St. Savior or near St. Savior, would have been some distance within Judeich's wall and could not possibly have been on the coast. The theory would, then, postulate a village and a port of Phalerum separated from the village. As a matter of fact, every indication from our authorities is to the effect that the port and the town were one and the same place.<sup>1</sup>

Judeich has asserted that my attempts to explain the reason for building a wall to a point near St. George are "Phantasien."<sup>2</sup> Briefly stated the reasons given in my article were: (1) to protect the road from Athens to Phalerum, near St. George, (2) to protect the fishing station at Phalerum, (3) to protect a large part of the very fertile Phaleric plain from land attacks by the enemy, (4) to protect an important and populous deme, and (5) to protect communications with the nearest Athenian port.<sup>3</sup> In the case of (1) I adopted an explanation of such a course, on the analogy of fortifications at Crane in Cephallenia, from Lehmann-Hartleben.<sup>4</sup> Judeich (p. 429) throws suspicion on Lehmann-Hartleben's interpretation of the fortifications at Crane but can offer no explanation of his own. Judeich also asserts that in any case the fortifications at Crane may not be compared with those at Athens because the Athenian Long Walls were a Periclean scheme of fortification, which has immediate parallels in Megara and Corinth. For two reasons this argument is not conclusive. In the first place, it is by no means a foregone conclusion that the scheme of defense which employed two long walls with a closed circuit, as at Megara and Corinth, was adopted at the time of the first building of the Long Walls at Athens in 457 B.C. It was, of course, the system utilized at a later date when the *διὰ μέσου τείχος* was built to the Piraeus. Now, the fortifications at Crane may have dated from the fifth century B.C., and could well have preceded the Athenian walls of 457 B.C.<sup>5</sup> In the second place, the feasibility of fortifications, such as those described for Crane, is the important point and the relative dates are not essential

<sup>1</sup> Day, *op. cit.* p. 165.

<sup>2</sup> Judeich, *op. cit.* p. 429.

<sup>3</sup> Day, *op. cit.* pp. 175-176.

<sup>4</sup> Lehmann-Hartleben, *Die antiken Hafenanlagen des Mittelmeeres*, *Klio*, Beiheft XIV, p. 78.

<sup>5</sup> Lehmann-Hartleben, *op. cit.* p. 78, note 3.

to the argument. But, if all of the above explanations are "Phantasien," how will Judeich explain the desire of the Athenians to defend Phalerum when placed at St. Savior? If securing of connection with the Piraeus had been the only aim it could have been easily obtained by building a much shorter wall.<sup>1</sup> It is difficult to believe that the Athenians would have put themselves to such unnecessary trouble and expense.

I have stated above the opinion that the solution of the complex Colias-Phalerum-Phaleric Wall problem to be preferred would be the one which did the least violence to our evidence from ancient writers. It is in only one case that I have had to reject the evidence of an authority by assuming an error and in the very same instance Judeich is compelled to assume an error almost as great. I refer to the question of the distance of Cape Colias from Phalerum. According to my solution I have had to assume that Pausanias' figure was about 7 stadia too large, whereas Judeich must assume that it is about 6 stadia too small. On the other hand, Judeich accepts practically none of Thucydides' statements in I, 107, 1, and II, 13, 7. He has also had to assume errors in Pausanias, I, 1, 5 and VIII, 10, 4, as well as in Demosthenes, LVII, 10. When one takes into consideration the fact that these five passages furnish the bulk of our evidence, it will be apparent how little Judeich has been able to accept. What has caused him to throw overboard most of the evidence in the case? On p. 429 he writes: "Trotzdem möchte ich von neuem hervorheben, dass ich mir eine Phalerische Mauer ohne irgendwelchen Anschluss an die Hafenfestung des Peiraeus nicht denken kann." On p. 158 we find the explanation of this inability to conceive a Phaleric Wall without an "Anschluss" to the Piraeus. It is because he assumes that Thucydides (II, 13, 7) demands a "geschlossenen Ring." This is far from true as a careful examination of the passage will show. Καὶ τοῦ Πειραιῶς ἔξιν Μουνυχίᾳ ἐξήκοντα μὲν σταδίων ὁ ἅπας περίβολος, τὸ δ' ἐν φυλακῇ ὄν ἡμῖν τοῦτου. Which half of the Piraeus Wall was to be defended? I believe that no exception can be taken to the statement that certainly no part of the wall which faced the land was to be left unguarded. Therefore, the part of the wall facing the sea was to be left unguarded over most, if not all, of its course. This is not at all surprising. As far as I am aware, it is a universally accepted view that Pericles realized that Athens could not carry on war against her enemies as a land power and planned to fight on the sea where Athens was greatly superior to her enemies. According to his plan the city was to be content with defending herself by land while waging offensive war by sea.<sup>2</sup> This would certainly explain why the walls of the Piraeus, which faced the sea, were not guarded. But, another passage of Thucydides (II, 93, 1), which describes the course of the war at the outset of the winter of the third year, states very bluntly the fact that the Athenians had practically no concern for

<sup>1</sup> Lehmann-Hartleben, *op. cit.* p. 79, end.

<sup>2</sup> Thucydides, II, 13; Delbrück, *Die Strategie des Perikles erläutert durch die Strategie Friedrich des Grossen*, 1890; Beloch, *Griech. Gesch.* II<sup>2</sup>, p. 300; Bury, *History of Greece*, pp. 399-401; *Cambridge Ancient History*, V, pp. 193 ff. I have refrained from discussing the bearing of the papyrus from Hawara on the problems discussed above because I have already considered it, along with a papyrus from Oxyrhynchus, in my article cited above. Judeich's emendation (p. 458, addendum to p. 158) of line 21 of the papyrus from Hawara is quite possible. I can not now quote that line as absolute evidence that Phalerum was a terminal of the Phaleric Wall.

an attack by way of the sea probably because of their great superiority there. Πρὶν δὲ διαλῦσαι τὸ ἐς Κόρινθον τε καὶ τὸν Κρισαῖον κόλπον ἀναχωρήσαν ναυτικόν, ὁ Κνήμιος καὶ ὁ Βρασίδας καὶ οἱ ἄλλοι ἄρχοντες τῶν Πελοποννησίων ἀρχομένου τοῦ χειμῶνος ἐβούλοντο διδάξαντων τῶν Μεγαρέων ἀποπειρᾶσαι τοῦ Πειραιῶς τοῦ λιμένος τῶν Ἀθηναίων ἣν δὲ ἀφύλακτος καὶ ἀκλήστος, εἰκότως, διὰ τὸ ἐπικρατεῖν πολὺ τῷ ναυτικῷ. It is, thus, apparent that Pericles did not contemplate at first a "geschlossenen Ring" (except in case of an emergency, when the South Wall would be used) and that he did not view with apprehension a coast line not protected by a wall manned with defenders. The "Anschluss" to the Piraeus thus becomes unnecessary and there remains no reason to suspect the accuracy of Thucydides' exposition of Pericles' defensive plans. With this statement of the case I leave it to my reader to decide which solution of the Phalerum-Phaleric Wall problem—that of Judeich or my own—"beruht aber schon in ihren Grundlagen auf allerhand Willkürlichkeiten."

Since the above was written there has come to my attention the article of P. Kastriotes in which the fact is emphasized that the discovery of the cemetery of the geometric period at Παλαιὸν Φάληρον and of the graves of seventeen executed criminals furnishes conclusive proof that the portion of the Attic shore near Παλαιὸν Φάληρον existed in the geometric period and in later times. *Arch. Eph.* 1915, p. 134 f. The "finds" made in these excavations came from trenches varying in location from Παλαιὸν Φάληρον to the place indicated by the second *i* of *Misia* on *Karten von Attika*, Bl. III. See *Arch. Eph.* 1911, p. 246 ff. It is, thus, apparent that the shore line of the Phaleric Bay had approximately the same form in 431 B.C. as it has at the present time. Judeich's position as regards this question is, therefore, untenable.

Kastriotes also argues for the location of Cape Colias at the modern Cape Cosmas. *loc. cit.* See his earlier arguments to the same effect in *Arch. Eph.* 1897, pp. 97-100.

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FIGURE 1.—SARDINIAN BRONZE. MALE FIGURE



FIGURE 2.—SYRIAN STATUETTE IN BERLIN

## NOTE ON THE BRONZE STATUETTES OF SARDINIA

MOST of the Sardinian bronze statuettes are of such poor workmanship that they do not lure the archaeologist to deal with their style; for the most part they are of interest to him only for illustrating the manners and customs of the ancient Sardinians. But even a primitive and clumsy figure has a peculiar structure; the body and limbs build up a characteristic composition of lines, their contours show a specific form, the modulation of the surfaces and the tension between the various parts of the whole are done in a peculiar and unmistakable manner. Therefore, everyone interested in ancient Sardinia or in early Mediterranean art will be grateful to von Bissing for his valuable paper in the *Röm. Mitt.* 43, 1928, 19 sqq., in which he establishes a chronological evolution of types placing the statuettes in three definite groups. The first statuettes were made in stone and terra cotta about the middle of the second millennium, or perhaps a little earlier. The casting of bronze examples was begun in the second half of the second millennium, and the latest ones belong to the seventh century B.C. It is of little importance that I should prefer to reverse the order of his second and third groups and regard the long, slim figures with thin limbs as later than the more ponderous and stouter ones of his third group. Every normal evolution develops from heavier to slenderer and more refined forms; compare, e.g., the latest figures of the Greek geometric style, which I have called 'Gliederstil,' with the earlier ones.<sup>1</sup> Another characteristic of an earlier date may be found in the round eyes of von Bissing's third group. The more normal ones of his second class must be later, for once more Greek art shows the same evolution from the round to the oval form.<sup>2</sup> But I am concerned in this paper with his first group only and not with its development or its relation to the later ones, but with the question whether it is of purely indigenous origin or was influenced from outside.

I shall not go into the problem of Eastern influence on many Sardinian objects,<sup>3</sup> or the vexed question of the Shardana which has been ably and cautiously dealt with by von Bissing,<sup>4</sup> but I shall mention only in passing that a statuette of unmistakable Syrian origin, now in the Museum of Cagliari,<sup>5</sup> proves that the Sardinians knew foreign sculpture at the end of the second millennium. In studying the early sculpture of the eastern Mediterranean and the Near East, it becomes evident that even primitive art affords a great deal of variation in types especially in the attitude of the limbs. Furthermore, the specific types are confined to a single country and are not spread over the whole area. To be sure, primitive art has some features common to all countries, but the assertions of certain archaeologists that all primitive forms occur everywhere is incorrect.

About twenty years ago the Danish scholar Poulsen in his illuminating book,

<sup>1</sup> *Fruehe Plastik in Griechenland und Vorderasien*, pl. 23 and pls. 19-21.

<sup>2</sup> Poulsen, *Der Orient und die fruehgriechische Kunst*, 108, 112.

<sup>3</sup> Porro, *Atene e Roma*, 18, 1915, 145 sqq.

<sup>4</sup> *Wiener Zeitschrift z. Kunde d. Morgenlandes*, 34, 230 sqq.; *Studi Etruschi*, 4, 1930, 69 sqq.

<sup>5</sup> Von Bissing, *Röm. Mitt.* 43, 1928, 62; V. Mueller, *Fruehe Plastik*, 126.



*Orient und fruehgriechische Kunst*, stated that a peculiar attitude of the arms is restricted to the 'Hittite' style and its sphere of influence, an assumption which was fully confirmed by my own researches. But this attitude, the characteristic of which is the vertical posture of the upper arm and the horizontal outstretching of the forearms, is also found in the Sardinian group with which we are concerned. Look, *e.g.*, at Figure 1. The right arm was apparently bent at some later time, and the original attitude was the same as that of the left arm. For comparison we may cite a 'Hittite' statuette in the Museum of Berlin (Fig. 2). Another Sardinian bronze (Fig. 3) varies this attitude by raising the right forearm and holding the hand outward. This peculiar position is characteristic of Sardinian and Phoenician works, and is illustrated by our Figure 4 in Berlin and by later works of Carthage. Because the attitude is deep-rooted in the East, the influence obviously came to Sardinia, and not vice versa. Furthermore, it is not likely that this attitude was invented independently in the East and in Sardinia, for it is very individual and rare, the more common one showing the palm held in the direction of the arm, *i.e.*, in a right angle to the body, not parallel.

As I have stated earlier,<sup>1</sup> two methods of representation of the upper part of the figure existed side by side in Syrian art: one has the upper arms kept close to the body without any space between them (Fig. 4); the other shows both the arms separated from each other sometimes by a very considerable distance (Fig. 2). Is it not strange that just these two attitudes are found also in Sardinia? (Figs. 1, 3.) I think this similarity confirms my assertion of an Eastern influence. Another point

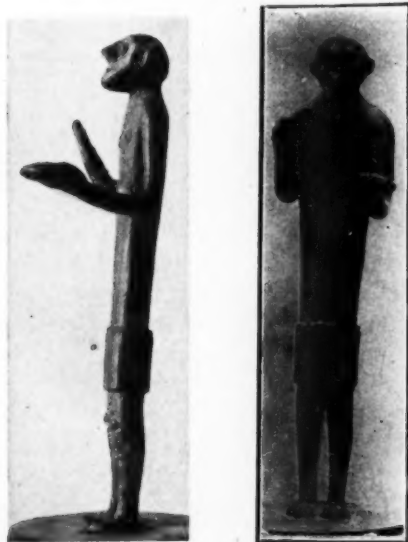


FIGURE 3.—SARDINIAN BRONZE FIGURE

of agreement lies in the kilt, but this is very common and does not prove anything. However, it is fixed in a strange low position on the body, and the body itself is very elongated and has almost straight outlines without modelling, while the breast is placed high. All these particular features are characteristic of another class of 'Hittite' statuettes.<sup>2</sup> Taken by themselves they would not prove any connection between Sardinia and the East, but supported by the attitude of the arms they afford strong proof of connections. Also the birdlike form of the head, with its short skull, the big nose, and the head thrown back, are 'Hittite' features<sup>3</sup> but these are really primitive characteristics that I do not wish to insist upon. Still the fact that they soon disappear in Sardinia is perhaps proof that they are not indigenous forms. There exist further two motives

<sup>1</sup> *Fruehe Plastik* 130; Fig. 382—our Fig. 2; Fig. 409—our Fig. 4; *Röm. Mitt.* 43, 1928, p. 64, Fig. 20—our Fig. 1; *op. cit.* 63, Fig. 19—our Fig. 3. I am deeply obliged to the German Institute at Rome for lending the blocks.

<sup>2</sup> *Fruehe Plastik*, pl. 41, Nr. 403 sq.

<sup>3</sup> *Fruehe Plastik*, pl. 37.



common to Sardinia and the East, namely a figure bearing an animal on his shoulders and a woman carrying a basket on her head.<sup>1</sup> These two motives belong not to a primitive art, but to a developed one. It is therefore likely that they were not invented by a spontaneous and primitive Sardinian art, but that they were taken over from the most developed art of this period, namely oriental art. To these may be added the motive of a god standing on the back of an animal which is made up of two foreparts placed back to back. These are peculiar forms which I have treated elsewhere.<sup>2</sup>



FIGURE 4.—SYRIAN STATUETTE OF DEITY IN BERLIN

The agreements thus seem to be so numerous that they prove a connection between Sardinia and the countries of the eastern shores of the Mediterranean. Because of the chronological position and the development of the arts in the two countries, there is no doubt that the Sardinians were the borrowers. About the question of the Shardana we do not gain any definite proof, because influence of art proves only commercial interrelations, not immigrations of peoples; only the attitude of the outstretched palm, although not an incontestable proof, lends probability to the assumption of an immigration from the East, for it is a ritualistic custom which is not likely to have been transferred without the peoples themselves.

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VALENTIN MÜLLER

<sup>1</sup> Von Bissing, *Röm. Mitt.* 43, 1928, 67 sq., figs. 22 and 23.

<sup>2</sup> *Orientalistische Literaturzeitung*, 1925, 785 sqq.

## MOSAICS FROM OLYNTHOS<sup>1</sup>

### PLATES I-IV

EXCAVATIONS were resumed at Olynthos on March 25, 1931, by the Johns Hopkins University Expedition under the auspices of the American School of Classical Studies at Athens and were continued until June 18.<sup>2</sup> We excavated some twenty-seven houses in the high-class residential district in addition to many shops and less impressive houses on the South Hill. Included among those on the North Hill was a complete block of ten houses, one of which, the House of the Nereid Mosaic, was discovered in 1928.<sup>3</sup>

Many of the houses had two stories, since we found the stone foundation of a wooden stairway in many of them. But only the lower parts of the walls are preserved since the upper parts were of sundried brick.<sup>4</sup> The walls are often covered with plaster in plain colors (red or white or black or yellow, with no designs). Even the sides toward the court are sometimes stuccoed but never the exterior sides on the main streets. The rooms are grouped about a court the surface of which was sometimes paved with cobblestones or cement; sometimes the floor was of hard-packed earth. Often there was a sort of peristyle with columns or pillars on four sides or at least on one or more sides, and then a loggia. Rooms open on this loggia, or directly on the court. Often the main living-room has a raised border and in the central sunken area, a pebble mosaic. There are usually three or four rooms on the north side of the court, and facing it so as to have a uniform southern exposure.<sup>5</sup> There are six to fourteen rooms on the ground floor, including often a bath room with tinted plaster walls, a tiled or cement floor, and a terra cotta hip-bath in place.<sup>6</sup>

These houses date from the end of the fifth or beginning of the fourth century

<sup>1</sup> Part I of a preliminary report on the Second Campaign at Olynthos.

<sup>2</sup> I am indebted to all the staff, to the loyal workmen, and to the authorities in Myriophyto (now officially called Nea Olynthos), to Professor Eustratios Pelekides and Mr. Macarones of Saloniki, to Professor Kourouniotis, general ephor of antiquities in Greece, to Director Rhys Carpenter of the American School in Athens, and to Professor Edward Capps, chairman of the Managing Committee, for their coöperation and valuable aid. Dr. G. Mylonas acted as Director for a month.

The funds were raised mostly in Baltimore by Dr. Hugh H. Young to whom I am much indebted, and \$5,000 was contributed by the American Council of Learned Societies.

The work was carried on by David M. Robinson, Director, Mr. Donald N. Wilber, chief architect, Miss Sarah Elizabeth Freeman, assistant architect, and a large staff of assistants: Mr. and Mrs. Arthur Parsons (coins); Mr. J. Walter Graham (lamps and loom-weights); Miss Gladys R. Davidson (vases); Miss H. M. Mary Ross (terra cottas); Mr. Alexander Schulz (bronzes), (Mr. Graham and Mr. Schulz also assisted in excavating certain sections); Mr. Euripides Melanides and D. M. Robinson (photography); Mr. George Vinko von Peschke (colored reproductions); Mr. Apostolos Kontogeorgios (cleaning and mending), assisted by his father, Mr. Georgios Kontogeorgios; Mrs. Robinson (commissary department and cleaning of coins); Konstantinos Tsiropoulos, foreman-in-chief.

<sup>3</sup> Cf. Robinson, *Excavations at Olynthus*, II, pp. 79-89.

<sup>4</sup> Such two-story houses are built to-day in Myriophyto with only the lower parts of stone, and often the whole is covered with stucco. The same old method of domestic architecture has survived for 2,300 years.

<sup>5</sup> Cf. Xen., *Mem.*, III, 8, 9; *Oec.*, IX, 4.

<sup>6</sup> Cf. for those of 1928, *Excavations at Olynthus*, II, pp. 46-50, figs. 136-140, pp. 103-106, figs. 248-250.

B.C. and are the precursors of the houses at Priene and Delos. The houses excavated by the French at Delos (which I revisited in 1931) are better preserved and supplement and explain those at Olynthos; but Olynthos has yielded more complete material in the way of terra cotta baths, roof-tiles, drain-pipes, etc. We also now have seven Doric capitals and a large number of pilaster capitals.

Although it is evident that the houses in the above-mentioned insula or block were diligently plundered after the destruction, we found in them two important hoards of silver coins, many vases, terra cottas, bronzes, basins, mills, and bath tubs. Most interesting, however, were the many courts and rooms paved with cement or laid in pebble mosaics with designs.<sup>1</sup>

The mosaic in House 26 (3 m. square), in the room with the raised border, is perhaps the most important Hellenic pebble mosaic (I do not say Hellenistic) ever found (Pl. I). It is the earliest figure mosaic with a mythological scene, and earlier than that at Corinth with palmettes and animals described by Dr. Shear.<sup>2</sup> The Olynthian one is in a somewhat different technique and earlier, since fragments of red-figured vases of the latter part of the fifth century B.C. were found just above it. The Olynthian mosaic might even date back into the fifth century. If it were much later than 400 B.C., the ends of the petals of the palmettes in the corners of the square would turn up and not down (as is the case). It is executed in white and blue-black natural pebbles. The central circular design (diam. 1.30 m.), representing Bellerophon on Pegasos slaying the Chimaera, is bordered by a pattern of spirals or tendrils within a square composed of meander and wave patterns. Bellerophon wears the Macedonian kausia or petasos and is clad in a chlamys, the two ends of which blow out behind him in the wind. Pegasos gallops spiritedly to the right; his wings are pointed in a manner characteristic of designs on coins of Corinth and her colonies (e.g. Leucas) about 400 B.C., and on coins of Seuthes. The saddle consists of an animal's skin,<sup>3</sup> one claw of which can be seen extending down behind him toward the right hind leg of Pegasos. With his left hand Bellerophon holds the reins and in his raised, right hand he brandishes a spear, evidently in the act of striking the Chimaera beneath him. The monster resembles the Homeric description (*Il.* VI, 162 ff.) and representations of the Chimaera on vases, coins, gems, and in sculpture. He has a lion's head and a snake's tail. A goat's head with horns projects upward from the back of the Chimaera but is looking to the rear, to the left,<sup>4</sup> whereas the

<sup>1</sup> These, of course, disprove the statements in books that figure mosaics date only from Hellenistic times or after Alexander.

<sup>2</sup> *A.J.A.*, XXXIII, 1929, pp. 526-528, fig. 10. In the *Classical Weekly*, XXIV, 1931, p. 124, Shear believes that the Corinth mosaic is as early as the Olynthian ones. I took occasion when I was visiting Corinth lately to study this mosaic carefully and I still feel that it is different from the Olynthos mosaics and also later. Surely Dr. Shear also errs in dating the interesting mosaics which he publishes so well in a luxurious volume, *The Roman Villa*, as Hellenistic, before 146 B.C.; they are undoubtedly Roman in technique, drawing, and coloring and can hardly date earlier than the first century A.D. Cf. *J.H.S.* LI, 1931, p. 116.

<sup>3</sup> For the saddle cloth cf. Miss Swindler, *Ancient Painting*, pl. VIII e from Daphnae, and Fig. 557, a wall-painting in a tomb of Marissa.

<sup>4</sup> On the Proto-Corinthian lekythos in Boston (Swindler, *Ancient Painting*, pl. VII b) the head of the goat is in the same direction as the lion's head, but in Payne, *Necrocorinthia*, pl. 30 (Middle Corinthian) and on black-figured vases in the British Museum (*Cat. of Vases in the British Museum*, B. 162, 417) the goat's head is to left, in the opposite direction from the lion's head as also on the Melian relief

Chimaera is fleeing to the right. It is a most lifelike representation of the Greek myth. It was perhaps influenced by some of the riders on the Parthenon frieze and by the Parthenon metope which represented Pegasos, but it also shows Corinthian influence brought in by Potidaean refugees after the Athenian destruction of Potidaea. It is perhaps the source of the reliefs connected with the Macedonian hunter cult which was so popular in a nation of horse-loving riders. The attitude of the horseman reminds one of that on Thessalian sculptured reliefs.<sup>1</sup> It occurs earlier on coins of Sermylia,<sup>2</sup> and later on coins of Pharsalos, of Philip, and of Tarentum. It is the attitude used in Hellenistic and Roman times on the famous Thracian<sup>3</sup> and Roman rider reliefs where the huntsman is spearing some animal. It occurs on the recently discovered altar from Plato's Academy which portrays on three sides with variations a rider wearing chlamys and petasos, raising his right hand to spear an enemy below; on the Dexileos grave monument; and on the Alexander Sarcophagus. The scene of Bellerophon and the Chimaera is rendered in almost the same scheme on the Persae vase in Naples<sup>4</sup> and the scheme continues even in mosaics of Roman times as in that from Autun,<sup>5</sup> now in the St. Germain Museum. In Byzantine and later times it was adopted for St. George and the dragon. The original design by Benedetto Pistrucci for the first English sovereign of 1817,<sup>6</sup> shows St. George on a horse, in exactly the same position as in the Olynthos mosaic. On the coin, however, the right hand is lowered.

At the entrance to the room where the Bellerophon mosaic is, two spirited, winged griffins are tearing to pieces a horned stag (Pl. II)<sup>7</sup> (done in white and blue-black pebbles with a few yellow ones), the same subject which we found in 1928 on a late fifth century sculptured marble relief.<sup>8</sup> Indeed the Olynthians were very fond of in London (*Zeits. für bildende Kunst*, XXXII, 1921, p. 95, fig. 2), or on the coins of Corinth with Bellerophon on Pegasos wearing the petasos and holding a spear on one side. On the other side of the coin the Chimaera has the goat's head to left but lion's head to right (cf. *Brit. Mus. Cat.*, pl. II, 22, fifth century, pl. XII, 28, early fourth century. Cf. also *Cat. of Jameson Collection*, pl. LXII, 1215, a silver Corinthian coin with Bellerophon and the Chimaera, quite similar to our mosaic and also two early fourth century coins of Leucas in my collection. Cf. *Yale Classical Studies*, II, Pl. I, 28-29.

<sup>1</sup> Casson, *Macedonia, Thrace, and Illyria*, pp. 230, 250, and fig. 9.

<sup>2</sup> Cf. Robinson, *Coins Found at Olynthus in 1928*, pl. I, 11; pl. IV, 66.

<sup>3</sup> Cf. *Jh. Oest. I*, XXIV, 1929, pp. 130 ff., and references cited there.

<sup>4</sup> Cf. Furtwaengler-Reichhold, *Griechische Vasenmalerei*, II, p. 143, fig. 46. On Bellerophon, cf. Maltén, *Jb. Arch. I*, XL, 1925, pp. 121-160. For the altar from Plato's Academy, cf. *Arch. Anz.* XLVI, 1931, pp. 218-222, figs. 1-3.

<sup>5</sup> *Mosaïques de la Gaule*, 800; Reinach, *Répertoire de Peintures*, p. 180.

<sup>6</sup> *Illustrated London News*, No. 4841, Jan. 23, 1832, p. 117.

<sup>7</sup> The mosaic measures 2.03 m. by 1.02 m.; the animal scene, 1.89 m. by .81 m. Professor Oikonomos tells me that in Hellenistic times the same arrangement occurs. At Klazomenai he found in the entrance to a house a mosaic representing Eros and Psyche and in the main room Amphitrite on a hippocamp.

<sup>8</sup> Robinson, *Excavations at Olynthus*, II, pp. 62-63, fig. 165. Strangely enough, so great a scholar as Professor Picard (*R. Et. Gr.* XLIV, 1931, p. 77, note 3) believes this relief to be Byzantine. He compares the sculptured relief of the Antonine period from an altar to Cybele on Thasos (*C. R. Acad. Insc.*, 1914, p. 288, and fig. 4) which represents two griffins attacking a deer (facing, however, to left) and shows how the motive was continued into later times. It is, however, an adaptation of some Greek work of the fifth or early fourth century. No Byzantine material was found in this section and the circumstances of discovery and the fifth and fourth century objects found with it leave no doubt as to its date. It is the flat, broadly-conceived style of relief often found in classical Macedonia. The design also occurs in a classical terra cotta in my collection.



designs with griffins, as vases and other mosaics from Olynthos bear witness.<sup>1</sup> In this same house (House 26) was a large court which was covered with a beautiful figure mosaic, most of which has been destroyed by the plough (Fig. 1). There remains, however, a fragment<sup>2</sup> of the broad border (bounded by a narrow border with a meander pattern below and one of laurel leaves and leaf and dart patterns above) in which a warrior with helmet (done in yellow pebbles), sword in right hand and a shield in his left, is seen storming to right against a centaur who holds a club (in yellow pebbles). Behind the warrior is part of another centaur.

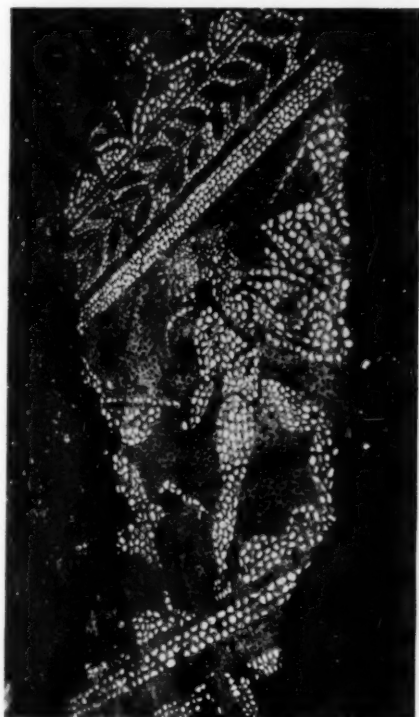


FIGURE 1.—MOSAIC FROM OLYNTHOS.  
WARRIOR ATTACKING CENTAUR

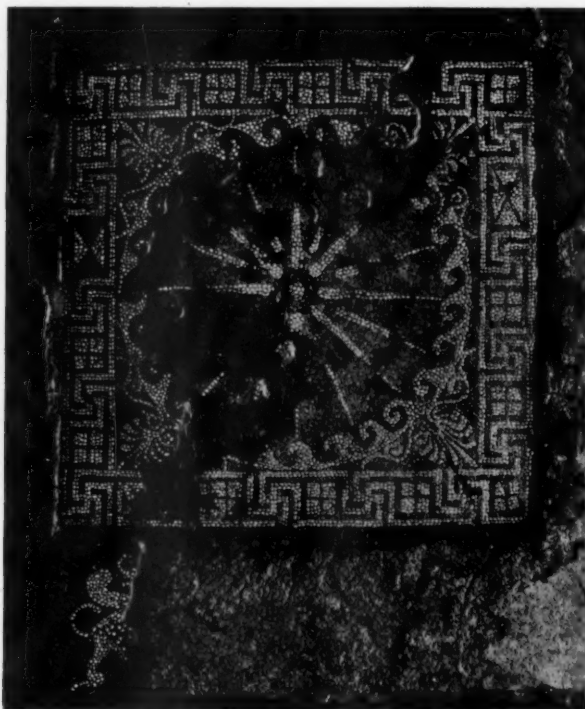


FIGURE 2.—MOSAIC FROM OLYNTHOS. "SUN" PATTERN

The main living-room of House 27 (in this same block) also has a pebble mosaic (Fig. 2) with the usual elevated cement border (upon which are remains of yellow paint).<sup>3</sup> The scheme is the common one of a circle inscribed in a square; the square

<sup>1</sup> One might compare the same design of two griffins tearing to pieces a horned deer (stag) on a so-called Apulian krater in the British Museum (F 276) where the griffin at the right has his left paw in front of the deer's body.

<sup>2</sup> The piece preserved measures 2.15 m. from north to south, 1.35 m. from east to west. Several yellow pebbles are used on the left leg above the knee and on the body. There are three or four pink pebbles, thirty-six yellow pebbles, but most are white or blue-black.

<sup>3</sup> Measurements: whole mosaic 3 m. square; inside the meander border 2.15 m. square; diam. of circle 1.80 m.; diam. of wreath 0.30 m.



consists of a peculiar meander pattern and the circle of the wave pattern; in the angles between are palmettes with the ends of the leaves turned up and ending in spirals. In the centre of the circle is a "wreath" or "sun" with sixteen rays running out to touch the circumference.

The color scheme is bright. The centre of the wreath is composed of white pebbles followed by two rows of green and two rows of purple. Between each pair of rays run in order five rows of purple pebbles, three of green, six rows of purple again, and finally two or three rows of white. The meander pattern is composed of white and blue-black pebbles with a few purple and green ones interspersed.

The entrance to this room is in the northeast corner and is occupied by a small mosaic panel (originally 0.90 m. from north to south) distinct in design from that of the main mosaic. It is badly damaged; at the east is a section preserved to a width of 0.15 m., showing five rows of dark red pebbles, three rows of green, and six rows of dark red again. West of this is another section preserved to a length of 0.41 m. (east to west) with part of a double-bodied winged sphinx (*cf.* mosaic in House 100 below) done in white and blue-black pebbles.

Olynthos, then, has produced mosaics executed not only in blue-black and white pebbles, but also in pebbles of five colors; consequently, the origin of multi-colored mosaics goes back to the age of Philip, Alexander's father, and dates long before Hellenistic times. The mosaics found by the French at Delos are carrying on a tradition already known long before at Olynthos and one might claim that even the beautiful mosaics at Delos, which represent in several colors a winged Dionysiac genius or Dionysos himself on his winged panther,<sup>1</sup> holding his thyrsos, are simply continuing the tradition and type of the Olynthian mosaic with a hunter on the back of some animal, spearing a monster beneath.

In the house next east (House 29) we found in the main room or *oikos* with raised border (on which traces of yellow remained) another pebble mosaic (2.95 m. square) with a terra cotta statuette of Hermes bearing a ram and dating from the middle of the fifth century B.C. lying on it, showing that the mosaic may be of the fifth century.

The central design is a four-spoked wheel (Fig. 3), (inner diam. 1.00 m.) such as occurs in two other mosaics at Olynthos. About this runs a broad circular border with a wave pattern, and the whole is framed by a wide meander design and a lozenge pattern at the entrance. In the next house also (No. 31) there is a circular pebble mosaic (0.98 m. diameter) with four floral palmettes at right angles to one another and the petals turning down as in fifth century art (Fig. 4). Within this one block, then, we have eight pebble mosaics with mythological scenes or designs (including the two found in 1928).

Another interesting mosaic (Pl. III) was found in the main living-room of House

<sup>1</sup> *Cf. Exploration Archéologique de Délos*, VIII, p. 401, and pl. LII, from the House of Dionysos; also *Mon. et Mem. Piot*, XIV, 1908, pls. XIV, XV. In a recent visit to Delos I was allowed to see a newly discovered and even better example of this subject. Dionysos, languorous in expression, wears a white tunic and yellow himation. On his head is an elaborate diadem adorned with vine leaves. He has a thyrsos in his right hand. The panther has a yellow and brown spotted body, huge claws, and a ferocious head. *Cf. B.C.H.* LVI, 1930, p. 502; *J.H.S.* LI, 1931, p. 205.

100, a house which was excavated to the southeast of this block at a lower level. In the fill above this floor much heavy plaster and red stucco, with some black, together with roof tiles and stones which had fallen from the walls, were encountered. On the north wall of the room was found a piece of stucco, horizontally divided by an incised line about 0.27 m. above the floor, red above and black below. The mosaic is surrounded by the usual raised cement border, except at the entrance on the west side.

This entrance-way is not set at one corner or exactly opposite the centre of the main mosaic, as is usual, but is displaced about 0.14 m. north of the middle point. The arrangement is further unusual in that the meander border, which normally surrounds only the central design, in this case also surrounds and includes that of the entrance-way. This meander border is composed of white and blue-black pebbles and is about 0.32 m. wide. The design in the entrance panel<sup>1</sup> (which orients at right angles to the entrance and with its top to the north) represents a lion attacking a stag. The stag faces west and has fallen forward on his front knees, with his head down. Behind him is the lion half-crouching, with one front paw on the stag's hind leg. In

<sup>1</sup>Measurements: about 1.40 m. east to west, by 0.48 m. north to south.



FIGURE 3.—MOSAIC FROM OLYNTHOS. FOUR-SPOKED WHEEL, WAVE, LOZENGE AND MEANDER PATTERNS

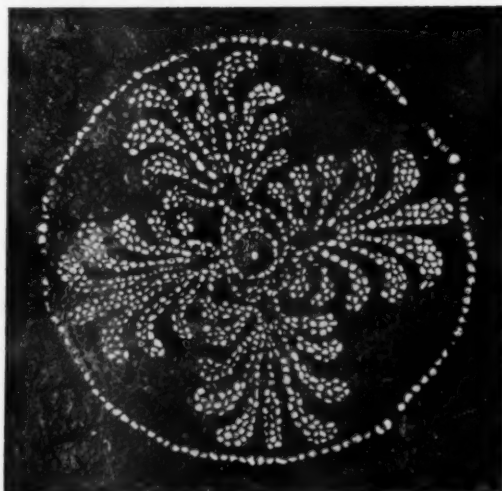


FIGURE 4.—MOSAIC FROM OLYNTHOS. CIRCLE WITH FOUR FLORAL PALMETTES

both cases the eye is green and the mouth red; the lion's mane is indicated by a number of green and red pebbles. One is reminded, not only of Corinthian, Caeretan,<sup>1</sup> and Ionic vases, but of the sculptured Xanthos relief in the British Museum<sup>2</sup> where the lion has his left paw on the deer's back and with his left rear foot grabs the left rear foot of the deer, both facing to the left. The central mosaic<sup>3</sup> is surrounded by the above-mentioned meander border, 0.32 m. wide (except where it adjoins the vestibule panel); within this, again, is a rectangular border, also 0.32 m. wide. In this, double sphinxes alternate with strange creatures, female above and fish-like below. The sphinxes are also strange. They possess one head, shown in full face, with green hair, red or purple ears, and eyes, nose, and mouth in black. Below this the shoulders, breasts, and forelegs are also shown in full face. Seated in profile on either side extend the two bodies of the sphinx with curving wings and tails. The figures resemble the sphinx on the Proto-Corinthian Chigi vase in the Museo di Villa Giulia in Rome<sup>4</sup> which we now know to be Corinthian in view of recent finds at Corinth. Such a double-bodied sphinx occurs on many Attic grave reliefs.<sup>5</sup> The other figures are also in full face with hair indicated exactly as in the sphinxes. The arms are extended up at the sides, but, instead of legs, there seem to be two fish-tails, curling outwards, reminding one of the much later Roman fragment of painting from Tusculum in the Louvre and of the Roman frescoes from Pompeii and Ostia where female figures have legs ending in fish-tails or tendrils. On either side of these sea divinities is a half palmette. Inside the border of double sphinxes is a wave pattern and then three rows of white pebbles (0.21 m. wide), forming a square. Within this is a circular border (0.90 m. in diameter and 0.20 m. wide) with the design of a wreath or laurel spray. The central circle was too badly damaged to allow any restoration.

The superior qualities of this mosaic appear firstly in the technique, for the pebbles are larger and set closer together than in the other mosaics so that the eye is not distracted by spaces between them; secondly in the design, which is complicated yet skilfully arranged; and thirdly in the coloring which, in its use of green and purple in addition to the usual white and blue-black pebbles, makes this one of the gayest mosaics we have found.<sup>6</sup> It may be dated in the fifth century B.C.

Two fine pebble mosaics were likewise found in an important house, which has been called the House of the Comedian. It was excavated at the southern foot of the East Hill (cf. survey plate IV in *Excavations at Olynthus II*). The first of these

<sup>1</sup> For the scene on a Caeretan hydria in Berlin, cf. *Ant. Denk.* II, pl. 28. Cf. also the lion attacking a stag, both in the same direction, to right, on the fifth century gold fish from Vetttersfelde, *Cambridge Ancient History*, vol. III of plates, 81 b.

<sup>2</sup> Cf. Pryce, *Cat. of Sculpture in the British Museum*, 1928, Vol. I, part I, B 295; Brunn-Bruckmann, *Denkmäler Gr. und Röm. Skulptur*, pl. 104. Cf. for same motive on a gem, Lippold, *Gemmen und Kameen des Altertums*, pl. 85, 7. Cf. also *Mon. Ant.* XXIII, 1914, p. 765, fig. 37 (in opposite direction however).

<sup>3</sup> Measurements inside the meander border: 2.75 m. east to west, 2.85 m. north to south.

<sup>4</sup> For the Chigi vase cf. *Ant. Denk.* II, pls. 44, 45; *Ausonia*, VIII, 1913, pp. 104 ff., pl. VI. For sculptured reliefs cf. *Mon. Ant.* XXIII, 1914, p. 765, fig. 40 (Caulonia, sixth century); Conze, *Die Attischen Grabreliefs*, nos. 859, 860, 932, 1347 and 1005, an Attic grave-stele in the British Museum. Cf. also the double sphinx on a fifth century bronze breast-piece in Karlsruhe, Schumacher, *Beschreibung der Sammlung Antiker Bronzen*, no. 787, pl. XVI, 22; pl. XXI.

<sup>5</sup> Around the mouth of a cistern on the South Hill a pebble mosaic with a simple design of squares was also found.

(Fig. 5) is in a room with raised border opening on the east side of the court.<sup>1</sup> In the entrance (0.93 m. wide), which has curving walls, is a butterfly design of two facing triangles in a rectangle bordered by a wave pattern. The composition is well planned and the principles of design agree with those taught in modern times in schools and in textbooks. Perhaps the modern artist would prefer more white pebbles and fewer black ones in the color scheme, but the arrangement of lines in the



FIGURE 5.—MOSAIC, HOUSE OF THE COMEDIAN, OLYNTHOS.  
CIRCLE IN SQUARE, TRIANGLES

entrance leads in to the square bounded by a wave pattern, within which the eye is again carried forward to the central design of a circle or wheel with four spokes (the wheel 0.80 m. in diameter). It is the same principle of dynamic design found in the mosaic with the sun in the centre to which the sixteen rays direct the attention as described above. In the same way, the circle within the square occurs in the Bellerophon mosaic and in others.

Because of the importance of the position as well as of the design of the second mosaic, it is well to preface its description with a description of the court.

On the east side of the court two bases remain *in situ*; on the north (counting the corner base twice), three; considering, however, the other evidence (the disposition of the mosaic patterns, and the irregular remains at the western edge where the pavement has been torn up by ploughing), it seems clear that the court was originally of the oblong type with three pillars on the east (and possibly west) sides, and four on the north (and possibly south) sides.

The mosaic as preserved occupies the whole area within the northeast corner of the stylobate as formed by its preserved east and north sides, and is some 0.07 m. lower than the top of the stylobate. The general arrangement, therefore, anticipates that of the peristyles and impluvia of Delos and Pompeii.

The southern and western portions of the mosaic are missing, but if, as is reasonably certain, the design was symmetrical, it measured about 4.50 m. from north to south, by 5.50 m. from east to west. The mosaic design proper is set at a distance of about 1.40 m. from the stylobate on the east, and at only about 0.80 m. from that on the north. The intervening space is laid off in a pattern of wavy lines alternating black and white and running north and south; there are fifty to sixty lines of these pebbles between the design and the east side of the stylobate.

<sup>1</sup> Measurements: 2.68 m. from east to west on north side, 1.60 m. on the south, 1.85 m. from north to south.



In the middle of the mosaic design proper is a rectangular opening (1.00 m. by 0.60 m.) probably once occupied by a rectangular stone altar similar to that found in 1928 (Pl. IV).<sup>1</sup> Wave, leaf, meander, and animal designs form successive rectangular borders about this opening. The last design is the most important. The figures occupy each of the four sides of the rectangular, frieze-like border; floral ornaments fill the northeast and northwest corners.

Of the south side of this frieze the only figure preserved is that of a bearded centaur to left (west); he seems to have a club (done in yellow pebbles) in his upraised right hand with which he is in the act of striking a lapith, of whom only part of the shield is preserved. In the east frieze, adjacent to the preserved end of the south frieze just described, we find two winged griffins (some red pebbles used in the heads) on either side of a deer which is running to left with legs far apart and head thrust forward. Crowded between one of the griffins and the floral ornament in the northeast corner is a duck to right with wings outstretched. At the east end of the north frieze, a wild boar with lowered head (some green as well as blue-black pebbles in the snout) faces a lion to left (with small yellow and dark red as well as white and blue-black pebbles, in the head and mane). Between the lion and the floral ornament in the northwest corner, a duck flies to left with wings outstretched (white, blue-black, green, pink, and yellow pebbles). At the north end of the west frieze a man in the attitude of the famous Aristogeiton statue strides to right, a spear or long sword in his right hand, attacking a wild boar. Then follows probably another man hunting a deer or stag.

The animal mosaics in this house as well as the double sphinxes and the Bellerophon mosaic remind one of scenes on Corinthian and Ionic vases. There is Ionic and Oriental influence and survival of Mycenaean fantastic motives, but the predominating influence is Corinthian and one cannot help feeling that when Athens destroyed the neighboring Potidaea in 432 B.C., Potidaeans took refuge at Olynthos and introduced Corinthian designs and Corinthian culture, the influence of which continued into the fourth century. But these mosaics may well date back into the fifth century B.C.

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*(To be continued in Part II)*

<sup>1</sup> Cf. Robinson, *Excavations at Olynthus*, II, pp. 89-91.



## TWO UNPUBLISHED INSCRIPTIONS FROM RHODES

SIG. V. DANEU of Taormina, Sicily, has kindly permitted this publication of two marble altars of cylindrical form<sup>1</sup> bearing Greek sepulchral inscriptions. They were purchased by him in Rhodes in 1924 and thence removed to their present position in his garden at Taormina. The inscriptions add new names to those previously known in Rhodes.<sup>2</sup>

One altar (Fig. 1) is decorated with three ox heads joined by garlands, each garland differing slightly in composition from the other two. The height of the

Ἀθηναίῳ  
Ῥοδάῃ  
μή  
τηρ  
μνήμης χάριν



FIG. 1.—RHODIAN ALTAR



FIG. 2.—A SECOND RHODIAN ALTAR

Τύραννον  
Νέωνος  
Λιαούση μήτηρ  
μνήμης ἔνεκεν

altar is 0.40 m., and its diameter ranges from 0.27 m. at the base to 0.225 m. at the top. The letters are regular, with uncial C and W and cursive Λ, with apication, and about 0.0225 m. in height. The inscription can hardly be earlier than the second century A.D.

Ῥοδάη is new among the names on Rhodian inscriptions, and, as far as I know, among Greek inscriptions. Ἀθήναιος, however, occurs in inscriptions from Rhodes<sup>3</sup>

<sup>1</sup> This type of grave altar is extremely common in Rhodes, where they were sometimes set on bases or themselves served as bases for statues or herms; cf. W. Altmann, *Die römischen Grabaltäre der Kaiserzeit* (1905), pp. 4-5.

<sup>2</sup> For the published Rhodian inscriptions see Hiller von Gaertringen, *I.G.* XII, fasc. 1; H. van Gelder, "Die rhodischen Inschriften," *Griechische Dialektinschriften*, III, 1 (1899); G. Porro, "Iscrizioni di Rodi," *Annuario della R. Scuola Archeologica di Atene e delle Missioni Italiane in Oriente*, II (1916), pp. 125-131; A. Maiuri, "Nuove iscrizioni greche dalle Sporadi meridionali," *Annuario*, II (1919), pp. 133-179; *Nuova Silloge epigrafica di Rodi e Cos* (1925); "Nuovi supplementi al 'Corpus' delle iscrizioni di Rodi," *Annuario*, VIII-IX (1925-6), pp. 313-322.

<sup>3</sup> *I.G.* XII, fasc. 1, nos. 7, 583, 658, 937.

and is a common Greek name.<sup>1</sup> The formula *μνήμης χάριν* has been found on only one other Rhodian inscription.<sup>2</sup>

The other altar (Fig. 2), without decoration other than the mouldings, is 0.40 m. in height, with its diameter ranging from 0.25 m. at the base to 0.20 m. at the top. The letters are regular, with uncial Ε, C, and Ω and cursive λλ, and slightly apicated, and vary from 0.0275 m. to 0.03 m. in height. The date of the inscription is about the same as that of the preceding one.

The name *Τύραννος*, common enough elsewhere,<sup>3</sup> is new in Rhodes. *Νέων* is a name found at Rhodes,<sup>4</sup> but *Λιαούση* is, as far as I know, new among Greek names. The formula *μνήμης ἐνεκεν* is here found for the first time in Rhodian inscriptions.

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<sup>1</sup> See, for example, Preisigke, *Namenbuch* (1922), p. 11.

<sup>2</sup> *I.G.* XII, fasc. 1, no. 168 = H. van Gelder, *op. cit.*, no. 3846.

<sup>3</sup> See Pape, *Wörterbuch der griechischen Eigennamen*, I, p. 24; Preisigke, *op. cit.*, p. 449; the indices of *I.G.*

<sup>4</sup> *I.G.* XII, 1, no. 46.

## A NOTE ON THE JEWELLERY OF DEMETRIUS THE BESIEGER

REFERRING to several items in the Delian inventories which catalogue offerings made by Queen Stratonice, daughter of Demetrius and Phila of Macedon, Tarn (*Antigonos Gonatas*, pp. 349–350) says: “and she had marked the occasion of the marriage of her daughter Phila to Antigonos in 277 or 276 by the dedication to Apollo of Demetrius’ necklace, which she had preserved, and her daughter’s ankle-rings.” This dedication is mentioned in the inventory of Antigonos (*I.G.*

XI, 199 B, l. 51): περιδέραια τὰ Δημητρίου καὶ φιάλια καὶ περισκελίδα ἀνέθηκε Στρατονίκη, ἄστατα.

This notice perhaps leaves the ownership of the περισκελίδες, bracelets for the legs, in doubt, but the later inventories seem to show that the jewellery of Demetrius consisted not only of the necklace, but also of bracelets for the arms and for the legs. Δημητρίου βασιλέως περιδέραια χρυσᾶ καὶ περισκελίδες δύο καὶ ψίλιον. *I.G.* XI, 287 B, l. 21. Cf. also restorations in 296 B, l. 37 and in 298, l. 142.



FIG. 1.— B.F. VASE IN THE POSSESSION OF THE AUTHOR

Demetrius was brought up in Asia, and his liking for the bizarre and extravagant in dress is frequently mentioned (*Plut. Dem.* 41, Athen., 535, etc.). He went beyond all the kings in his adoption of Persian luxury (*Plut. Dem.* 2, Athen., *loc. cit.*) and evidently was, like the Persian nobles, στρεπτοφόρος, and ψελιοφόρος<sup>1</sup> (*Herodotus* 8, 113). Alexander aroused criticism by adopting the Persian dress (Athen., 537).

Of his gold and purple mantle, left unfinished at his death, Plutarch says that not one of the kings afterward, however proud and haughty, had the nerve to put it on. His daughter's offerings at Delos give an additional touch to the dazzling picture of the Besieger when off duty, shining from head to foot with his purple kausia tied on his head with a gold embroidered diadem, his chlamys purple, embroidered

<sup>1</sup> For the περισκελίδε: worn by men, see Daremberg-Saglio, *s.v.*

heavily with gold, and his shoes of purple felt, also gold-embroidered, a gold necklace, gold bracelets about his arms and gold bracelets on his legs. As Plutarch says (*Dem.* 41), he was a king for the tragic stage.

A Persian warrior on an Athenian black-figured vase on white ground, which is in my possession, wears the anklets. (Fig. 1.) The vase belongs to the early part of the fifth century and probably was made not long after the battle of Marathon (*cf.* Herodotus 6, 112). It employs the old fighting scheme, seen on the Heracles and Cycnus vase in Munich, for a combat between a Greek and a fallen Persian warrior, who wears the costume described in Herodotus 7, 61 (*cf.* also Xen. *Cyropaedia*, VIII, 3, 13), and has the wicker shield and quiver and dagger described by Herodotus.<sup>1</sup> The contrast between the Greek and the Persian equipment on the vase is very striking. Another interesting case of the anklets is that of the charging Amazon on the Cachrylion cylix (E 40 in the British Museum). The Amazon has an anklet on her left leg; the right leg is no longer visible. Amazons wear costumes so like the Persian that it is often difficult to distinguish the fighting Amazon from a Persian warrior.

But it is unnecessary to elaborate the point, as it is sufficiently clear that the anklets were a part of the dress of a Persian warrior or nobleman.

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<sup>1</sup> *Cf.* A. S. F. Gow, "Notes on the Persae of Aeschylus," *J.H.S.* XLVIII, 1923, pp. 144 ff.

## THE BEARING OF THE EXCAVATIONS AT TELL BILLA AND AT TEPE GAWRA UPON THE ETHNIC PROBLEMS OF ANCIENT MESOPOTAMIA<sup>1</sup>

WHEN a quarter of a century ago the late Eduard Meyer first advanced the theory that the Semites preceded the Sumerians in Mesopotamia,<sup>2</sup> his solution seemed then to carry immediate appeal. The Sumerians had only recently been admitted into the League of Ancient Nations. There had not been enough time to evaluate accurately their written records, and at Ur, Kish, and Warka the surface had barely been scratched. It is only through recent discoveries, both in the archaeological and philological fields, that we have gained a better understanding of the remarkable rôle which the Sumerians played in early historical times. As a result, the Sumerian cause has gradually been gaining momentum. The scope and the extent of the Sumerian contributions to civilization have justly evoked the admiration of the scholarly world. It was perhaps to be expected that sound judgment should be influenced in some instances by undue enthusiasm. One need hardly call attention to some amazingly definite and complete accounts of the Sumerian *Weltanschauung* that some writers have thought themselves called upon to present. We have all, no doubt, derived our share of harmless amusement from the theories of certain writers on anthropological topics, according to whom the Sumerians formed the basic ethnic stock of those favored nations that have proved themselves superior, in the opinion of those writers, in our own times. The majority of students, however, have found demonstrable facts no less interesting, and a great deal more satisfying. They have been content to render unto the Sumerians only such homage as appeared justified by careful study and by mature judgment.

We are now in a position to know that the actual achievements of the Sumerians were far more substantial than was thought possible two decades ago. What still remains difficult and debatable is the problem of the chronological sequence of the earliest ethnic groups of Mesopotamia. Curiously enough, it is precisely those scholars who have dealt with the Sumerian remains most directly, who entertain the gravest doubts as to the priority of the Sumerians in the land which they helped to make famous. So admirable a student of the Sumerian language as Poebel has recently expressed the view that the Semites may indeed have been the earlier ones to settle in Mesopotamia.<sup>3</sup> Woolley, whose good fortune it has been to bring to light perhaps the most beautiful remains of Sumerian art, has even gone so far as to assert that not one but two heterogeneous groups had discovered the fruitfulness of the Valley of the Two Rivers before the Sumerians were attracted to it.<sup>4</sup> Clearly, the solution of the problem is now far less simple than it appeared to Eduard Meyer.

The third ethnic element, by the side of the Sumerians and the Semites, was first

<sup>1</sup> Paper read before the XVIIIth International Congress of Orientalists, at Leiden, Holland, on September 8, 1931.

<sup>2</sup> *Sumerer und Semiten in Babylonien*, Berlin 1906.

<sup>3</sup> Cf. his article entitled "Eine neue sumerische Mundart" in *Zeitschrift für Assyriologie* XXXIX (1929), pp. 129-139.

<sup>4</sup> *The Sumerians*, Oxford 1928, pp. 9 ff.



brought into discussion eleven years ago. Its introduction is due to Campbell-Thompson who in 1920 discovered on the site of ancient Eridu a type of painted pottery that was obviously related to the ware of early Susa and its congeners. A theory was promptly advanced that the makers of that aeneolithic pottery represented the oldest population of Mesopotamia. Since then other Mesopotamian sites have yielded similar ware, usually in layers that were stratigraphically lower than the definitely Sumerian strata. The priority of the Painted Pottery Folk is ascertained beyond any possibility of dispute. Our main difficulty arises from considerations of their identity. On this point scholars are divided into two fairly distinct camps. One group would connect with the Sumerians the makers of the prehistoric painted pottery. The other prefers to keep the two elements strictly apart. It may be remarked in passing that the strength of the two opposing parties is far from constant, as the views of the individual adherents of either theory have been on occasions subject to change.

The purpose of the present paper is to discuss briefly the bearing of the recent excavations at Tell Billa and at Tepe Gawra upon the ethnic problems outlined above. I am well aware that such a discussion, limited as it is in extent, is apt to stir up more problems than it can solve, more indeed than are at all capable of solution at the present state of our knowledge. If I take the liberty to restate some views previously expressed, before adducing a few bits of fresh evidence, it is primarily in order to invite a wider participation in the discussion. A year ago I was—some have said rash enough, others have been so kind as to say optimistic enough—to present certain views that I had reached on the subject in a book entitled "Mesopotamian Origins."<sup>1</sup> Summed up briefly, the argument ran as follows: A number of Sumerian place-names, known to us from the oldest available records, were found to be without an adequate Sumerian or Semitic etymology. These names comprised three of the five prediluvian cities as recorded by Sumerian tradition. A further examination revealed that the majority of the place-names in question were characterized by the very two endings that are used as noun-formatives in the Elamite language. A tentative conclusion seemed therefore not unjustified that our names went back to an Elamite, or Proto-Elamite, strain in the oldest population of Mesopotamia. Related onomastic material was further adduced from the territories known to have been inhabited by the Lullu, the Gutians, and the Kassites. A careful study of the available sources made it probable that all those peoples were actually related to the Elamites, thus confirming certain views previously suggested by several of the students of the subject.<sup>2</sup> Subsequently, the philological material from the numerous Hurrian sources was brought under investigation. The result was that an ultimate philological relationship between the Elamites and their hill-neighbors on the one hand, and the Hurrians on the other was made to appear highly probable. And philological relationship is generally strongly indicative of racial affinities.

I should be the last one to overestimate the validity of conclusions based chiefly on a study of proper names alone. Such material can be of value only if it happens to form one of the links in a longer chain of cumulative evidence. Some critics,

<sup>1</sup>University of Pennsylvania Press, 1930.

<sup>2</sup>For literature, see *ibid.* ch. II.

whose opinions the present writer values very highly, have attempted to invalidate this particular source of evidence by suggesting that most of the names adduced in the discussion could represent good Sumerian material; the endings for which they were singled out are not unknown to Sumerian. The vital point that they have overlooked, however, is that in the majority of the instances in question an adequate Sumerian etymology is unfortunately wanting. And since precisely those endings were well established in Elamite as regular grammatical elements, the conclusion commended itself that the names themselves should be assigned to that language in which those elements were a normal occurrence.

This philological argument was supported, to the writer's thinking, by the independent evidence of archaeological data. It all centers around the makers of the prehistoric painted pottery. To the superb ware of the First Township of Susa were found related, as has been demonstrated by Frankfort<sup>1</sup> and others, the ceramic products of Musyan, Bender Bushire, Abu Shahrein, Tell el-Obeid, and of places as far west as Tell Zeidan in Northern Syria. To a lesser degree this is also true of the painted pottery of Samarra and the relationship can be even extended to certain sites in Armenia, Turkestan, and Baluchistan. Without bringing into discussion the ware of Jemdet Nasr and the analogues of the Second Township of Susa<sup>2</sup>—lest a confusing problem become worse confounded, the argument narrows down roughly to this: Either the painted pottery of Tell el-Obeid and Abu Shahrein is Sumerian, in which case all the analogues of so-called Susa I must be related to Sumerian remains more or less intimately, or else the aeneolithic painted pottery has no connection whatever with the Sumerians. In the latter case the oldest population of Lower Mesopotamia—for the remains in question antedate the definitely Sumerian finds—was of a non-Sumerian stock. Its relatives must be sought in the First City of Susa and in the areas in which related material has been brought to light.

I am obliged at this point to apologize for riding over the entire field in so rough-shod a manner and for avoiding purposely a number of side-issues. If these latter had been given due consideration the problem would have appeared far more involved than might be evident from the above description. But while this statement is by no means complete, it will suffice for our present purposes.

Now what is the usual position of scholars with regard to the alternatives that have just been outlined? As previously indicated, one group of students is unwilling to be convinced by the view that the Sumerians were strangers to most of the districts in which analogues of the First Township of Susa have so far been discovered. Their opponents contend that the enormous expanse of this First Aeneolithic Civilization corresponds but very little with the later distribution of the Sumerians. Besides—they add—there are marked differences between that civilization and the typically Sumerian remains, for all that the two groups tend to shade off, the one into the other, in later times.

It is the view of the present writer that it is extremely hazardous to assume that

<sup>1</sup> *Studies in Early Painted Pottery of the Near East*, London. Vols. I-II, 1924-1927.

<sup>2</sup> Whatever may be said concerning the relationship of so-called Susa II to Susa I, one fact remains beyond dispute, viz. that the former is considerably more recent in date. The polychrome naturalistic pottery is therefore without direct bearing upon the problem discussed in the present paper.

the Sumerians were responsible for the earliest painted pottery of Mesopotamia and, consequently, also for that of the neighboring lands. It was shown that the philological evidence may be interpreted as distinctly in favor of the Elamites and against the Sumerians. The archaeological data point in the same direction, since they lead us to the First City of Susa, the ancient capital of Elam. Added to this is the not too negligible evidence of ethnic survivals in later times. There is nothing whatever to prove that Sumerians were ever in a racial majority, say, north of Kish.<sup>1</sup> Contrasted with this is the fact that the Elamites, the Guti, the Lullu, and the other tribes, "whose languages were complicated," as an ancient text has it,<sup>2</sup> were constantly in annoying proximity to the culture lands of Sumer and Akkad. These peoples come up again in Assyrian times, long after the Sumerians had disappeared from the stage. Nor is it at all unlikely that the same group has maintained itself as the basic element in the mountain districts of the modern Near East, for the so-called Armenoids or Anatolians are probably to a pronounced degree a racial continuation of the oldest inhabitants of the district.

It still commends itself, therefore, as the most probable solution that the non-Sumerian and non-Semitic mountaineers were the first to settle in Mesopotamia, following the course of the Two Rivers that were building up the fertile valley. The Semites reached the country from the south, and probably also from the west, while the Sumerians arrived at the head of the Persian Gulf some time later, to form the third ethnic stratum in the country. Whether they had come by land or by sea, whether in a single wave or in several successive invasions, no one can say as yet. What we do know is that they brought with them a marvellously advanced civilization and that they proceeded to develop the country in a way unheard of before. Unfortunately for them, the wedge that they had driven in between the northerners and the Semites was bound to give, slowly but steadily. In the course of a millennium or so the Sumerians are almost completely assimilated or absorbed. For want of reinforcements, no doubt, from the country of their origin they succumbed to the masses around them, which were being constantly augmented by new arrivals from the lands nearby.

This is in the broadest outlines the theory which the writer would sponsor and defend. I know that the number of those who share this position is conspicuously small. Nor does the writer, for all his reputed optimism, expect it to be substantiated in all its details. If his views appear at times to be expressed with unwarranted confidence, it is due primarily to the cumulative effect of a considerable amount of diversified, and—to his thinking—favorable evidence. To be sure when we get back as far as the aeneolithic period in Mesopotamia, our fragmentary evidence leaves room for little that is really puncture-proof. For the very same reason, however, we should employ less often the Sumerians as an unfailing *pièce de résistance*, a procedure that is not infrequently followed with altogether too much complacency.

In the light of the preceding remarks the results of recent excavations on two

<sup>1</sup> Cf. *Mesopotamian Origins*, pp. 50 ff.

<sup>2</sup> Cf. the bilingual inscription published in *Royal Inscriptions from Ur*, 1928, no. 146, cols. III-IV, 1-5.

north Mesopotamian sites are worthy of careful consideration. I am referring to Tepe Gawra, a mound situated about fifteen miles north of Mosul and two miles east of Khorsabad, and to Tell Billa, which lies eight miles further east. Excavations were begun at Tepe Gawra in the autumn of 1927 with two trial trenches,<sup>1</sup> to be resumed on a larger scale in the spring of 1931. At Tell Billa archaeological work has been going on since the fall of 1930. The two expeditions are being sponsored by the American School of Oriental Research in Baghdad and the Museum of the University of Pennsylvania, and in the case of Tepe Gawra also by the Dropsie College of Philadelphia.

One of the most interesting things about Tepe Gawra is the fact that not less than ten strata belong to the period of the prehistoric painted pottery. The mound is therefore one of the oldest in Iraq. In the lowest third of the mound copper is entirely absent. From its middle portion we have extensive architectural remains culminating in a splendid shrine. This period too must be assigned to the prehistoric age, as flints and obsidian are still used exclusively for implements and for weapons. The pottery is mostly plain. The decorated ware is mostly of the incised type. What little painted ware there was seems to have been confined to chalice-shaped cups, the prevailing color-scheme being bistre on buff. In a few instances a simple lattice design, usually applied in red paint, has been found in connection with the other shapes of the period in question.

The upper third of the mound consists of seven strata, which were excavated in the spring of 1931 layer by layer. It is here that copper first comes into general use, though flints are still in evidence as high as the fourth stratum. The objects dating from the beginning of this period are all of the Early Bronze type. The building material is either stone, or sun-dried brick upon a foundation of rubble. The pottery is for the most part plain, but incised and painted specimens are also found. In the case of the latter the decoration is generally applied around the shoulder of the vessel, and the design is composed as a rule of cross-hatched combinations. Incidentally, it is worthy of notice that painted pottery is found throughout the entire history of Gawra, *i.e.* from the beginning of the fourth to the middle of the second millennium.<sup>2</sup>

For our present inquiry it is the lowest third of Gawra that interests us mostly. Ten layers of prehistoric painted pottery should go a long way towards lessening the mystery which still surrounds the race that made that ware. When Gawra I has been completely laid bare, in the course of systematic excavations, it will undoubtedly throw much new light on the subject. What we have obtained so far from our trial trenches is, however, interesting and surprising enough. To begin with, there is here no trace of copper, and we are, therefore, dealing with a strictly neolithic civilization. Even more amazing is the variety of types of painted pottery that these strata have yielded thus far. By the side of fabrics common at Tell el-Obeid and at Abu Shahrein we have typically Musyan examples. There are unmistakable

<sup>1</sup> Cf. the author's "Preliminary Excavations at Tepe Gawra" in the *Annual of the American Schools of Oriental Research* VIII (1928).

<sup>2</sup> The view generally prevailing is that apart from some painted ceramics from Ashshur and Dûr Tukulti Enurta all the painted ware of Mesopotamia is prehistoric. Both Tepe Gawra and Tell Billa have shown that the north was never without its painted pottery up to the first millennium B.C.



contacts with Anatolia, and finally, we have specimens that show distinctly Chinese characteristics in decoration.<sup>1</sup> They form a veritable museum collection, gotten together one might say for the purpose of baffling the nearly helpless modern investigator. If we insist, nevertheless, on a more rational explanation, we are obliged to assume that Gawra lay near the main highway along which traveled the styles in painted pottery. This would place the sources of our fabrics in the north, as the southern types are comparatively limited. This assumption has much in its favor on more accounts than one.

But this is not the place to lose oneself in details. To pass on to Tell Billa, the results relevant to our present inquiry may be summed up as follows. The lowest strata at Billa correspond to the middle layers at Gawra. The connecting link is the pottery, chiefly the characteristic chalice ware, both painted and incised. This period is succeeded by an occupation that also recurs at Gawra, this time in the topmost third of the older mound. The mode of building is identical in both places, and the shoulder-decorated pottery featuring a peculiar combination of cross-hatched designs is common alike to Gawra and Billa. There is also absolute correspondence in the bronzes. Of the unique pieces may be singled out a typically Anatolian battle-ax which came from Billa. Then follows on both mounds the Hurrian period with its Anatolian and Aegean fabrics (the painted designs include the typically Aegean dolphins) and its "Syro-Hittite" cylinder seals. In addition to this Billa contains also Assyrian and even later occupations, which need not detain us in this connection.

This tourist progress through two long-inhabited mounds cannot have failed, nevertheless, to impress us with one outstanding fact. In the twenty-five hundred years of Gawra and in the fifteen hundred years of Billa that precede the Assyrian period there was nothing, to judge from the remains discovered up to date, which points clearly and definitely to Sumer. The prehistoric period is linked up primarily with the north. The middle period of Gawra and the parallel early period at Billa have their points of contact chiefly with Anatolia. In the bronzes and in the architectural remains there is nothing that is peculiarly Sumerian. The terra cotta figurines are unmistakably Anatolian. Nothing further need be said about the Hurrian remains with their overwhelmingly western affiliations. The only recognizable link with the south is furnished by some of the cylinder seals. But in the first place, these seals do not occur until comparatively late, being absent from all but the seven topmost strata at Gawra. Secondly, a considerable number of them is markedly un-Sumerian, both in conception and in execution. Thirdly, seals are too ubiquitous, and too easily transportable, to serve as a reliable criterion of origin. Lastly, our oldest seals, distributed over two-thirds of Gawra, are stamps—a type that is in no way peculiar to Sumer, but is very much at home in the northwest.

Lack of space forbids me to go into further details. Many objects that could be very useful in this discussion had to remain unmentioned. Of course, it is quite possible that a different interpretation will be given by others to some of the finds in question after they have appeared in publication. I seriously doubt, however,

<sup>1</sup> This was kindly pointed out to me in a private communication of Dr. Frankfort.



whether such occasional differences of opinion here and there would greatly affect the general conclusions.

If you start with the painted pottery of the south alone and ask, as some have done, "Why cannot this ware be assigned to the Sumerians?" the question may be logical enough. But if you start from the north and proceed from places like Tepe Gawra with all its prodigious variety of shape and design, the possibility of the Sumerian authorship of that pottery becomes immeasurably remote. The stubborn persistence of the painted ware in the north far into the Assyrian times is a further argument for its northern origin. As far as our present indications go, we have to look towards the Caucasus for the home of the original settlers of Mesopotamia. Perhaps it is not altogether a legend, or a coincidence, that for bringing the light of civilization to the world Prometheus had to pay the supreme penalty imprisoned on a Caucasian summit. But for us of today the light that illuminates the Titan is still too dim to enable us to distinguish between those who followed him and the others who chained him to the rock.

E. A. SPEISER

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# GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

DECEMBER 29-31, 1931

THE Archaeological Institute of America held its thirty-third meeting for the reading and discussion of papers at Richmond, Virginia, December 29, 30 and 31, 1931, in conjunction with the American Philological Association and the Linguistic Society of America. The Institute was the guest of the University of Richmond and of the Richmond Society of the Institute. There were four separate sessions for the reading of papers, besides one joint session with the other two societies mentioned. The subjoined summaries of papers were furnished by the authors.

TUESDAY, DECEMBER 29. 2.00 P.M.

## 1. SAME, A LITTLE-KNOWN ANCIENT SITE:

ALEXANDER D. FRASER, University of Virginia

In this paper, attention was drawn to the archaeological possibilities of several ancient sites in the island of Cephallonia. The most promising of these is Same, on the east of the island. The site was illustrated by means of a contour map and photographs. A number of small objects found on the site in the summer of 1931 were shown.

## 2. WINGS IN RED-FIGURE POTTERY: HAROLD L. CLEASBY, Syracuse University

This investigation is a study of the shape of the wing of human-bodied figures in Athenian red-figure ware of the fifth century B.C. For the relative dates of painters and the attribution of unsigned pieces Beazley's *Attische Vasenmaler* is taken as authoritative.

In the Ripe Archaic Period a *broad* wing is used by the Berlin Painter, the Pan Painter, the Dutuit Painter and their contemporaries. At this same time, however, a *lengthening* wing occurs, apparently beginning a little later than the broad wing, but used together with it by such artists as the Providence Painter, the Bowdoin Painter, the Dionokles Painter, and others. Hermonax, at the beginning of the Classic Period, shows not only the lengthening wing, but also a fully developed *long* type (Munich 2413). About the middle of the century the long wing becomes dominant; it is favored by the Altamura Painter, the Niobid Painter, the Villa Giulia Painter, and by Polygnotos and his companions. As the last quarter of the century approaches, the long wing is very often carefully *elaborated*, for example, by the Eretria Painter, and especially by Meidias.

The tendency in the evolution of the wing-outline may be expressed as follows (the dates are approximate): the *broad* wing flourishes 500-460; the *lengthening* has its greatest vogue 475-440; the *long* wing begins about 460 and continues to the end of the century and afterwards; the *elaborated long* is found from 430 to 400 and later.

In sculpture the Eros of the Boston three-sided relief has *lengthening* wings; the Nikai of the balustrade of Athena-Nike have *long* wings.

In dating and attributing unsigned vessels we are usually obliged to accept the accumulative evidence of several criteria each one of which is not in itself determinative; to the list of such criteria may be added with profit the outline of the wing.

## 3. LOCAL FESTIVALS OF DELOS, CHIEFLY FROM INSCRIPTIONAL EVIDENCE:

IRENE C. RINGWOOD, Vassar College

#### 4. HELLADIC VS. MINOAN: J. PENROSE HARLAND, University of North Carolina

The theory that Minoans of Crete conquered parts of the mainland of Hellas has met with an acceptance to a degree incommensurable with the evidence adduced to support it.

A study of the dress, ornaments, weapons, gold and silver vases, frescoes, gems, and the minor arts of the mainland reveals strong Minoan influence in Hellas, but nothing more; northern and eastern elements also appear. And Helladic pottery, while strongly influenced by that of Crete, was hardly supplanted by it.

Hellenic religion contains much that is apparently Minoan, but there seems to be no indication that the Minoan religion was superimposed on that of the mainland. The traditions, associating Hellas with Crete, are late or have as a kernel merely the existence of cultural relations between the two regions. The legends linking Athens and Delphi with Knossos, at most, point to similarities in cult or to relations between the localities in question.

Moreover, there is definite evidence against the "Minoan" theory. In contrast to the Minoan, the mainland palace has the characteristically northern megaron with the fixed hearth, pitched roof, and the court in front. The shaft graves, sculptured grave stelai, the tholos tombs, and certain burial customs can hardly be derived from Crete. And, above all, the gold face masks with the decidedly non-Minoan mustache and beard argue strongly against a Cretan conquest. The inlaid bronze daggers may possibly be derived from the East rather than from Crete.

Significant is the complete absence from Helladic sites of inscribed tablets, found in such quantities in Crete. A form of Minoan writing on L. H. vases (1400-1100) does not prove that a Minoan language was used on the mainland. On the contrary, the Asine inscription indicates that Greek was spoken here during this period.

In the light of this "anti-Minoan" evidence, the theory of a Minoan conquest of the mainland should, it seems to me, be abandoned. Trade relations and the natural diffusion of culture may account for the similarities in the two civilizations.

#### 5. HEREDITARY PRIESTHOOD IN MYCENAEAN TIMES:

CARL W. BLEGEN, University of Cincinnati

#### 6. ELEUSIS IN THE BRONZE AGE: GEORGE E. MYLONAS, University of Illinois

This paper will be published in the *A.J.A.*

WEDNESDAY, DECEMBER 30. 9.30 A.M.

#### 1. SOME INSCRIPTIONS FROM THE ATHENIAN AGORA:

BENJAMIN D. MERITT, University of Michigan

This paper will be published in an early number of *Hesperia*.

#### 2. SOME PYGMIES AND CROCODILES IN ART:

WALTON B. MCDANIEL, University of Pennsylvania

This paper will be published in the *A.J.A.*

#### 3. SOME RECENTLY DISCOVERED INSCRIPTIONS IN ROME:

HENRY A. SANDERS, University of Michigan, Charles Eliot Norton Lecturer of the Institute

#### 4. THE PALACE AT VOUNI IN CYPRUS:

VALENTIN MÜLLER, University of Berlin and Bryn Mawr College

This paper will be published in the *A.J.A.*

#### 5. THE SECOND CAMPAIGN AT OLYNTHOS: DAVID M. ROBINSON, Johns Hopkins University

This paper will be published in the *A.J.A.*

WEDNESDAY, DECEMBER 30. 2.00 P.M.

## 1. MAPPING THE RIO GRANDE PUEBLOS FROM THE AIR:

PAUL REITER, School of American Research

## 2. THREE PARTHIAN PALACES AT DOURA-EUROPOS (Yale-Syrian Expedition):

ALAN M. G. LITTLE, Yale University

The 1930-31 season of excavations included in its programme the excavation of a palace hitherto supposed to be of a defensive nature, the redoubt which proved to be a residential palace of the late Hellenistic period. Contemporary with the military palace on the adjacent citadel, it shares with it an isodamous scheme of wall decoration, carried out in stone, for which we have no parallels except in the stucco wall decorative schemes of Priene, Delos, and the first style in Pompeii. For the external decorative scheme no stucco prototype can be found, but parallels exist in the painted representations of the second style in Pompeii. For the plans of these two palaces considerable analogies exist in the Parthian palaces excavated by the University of Michigan Expedition at Tel Umar, the ancient Seleucia. Here is found the same principle of an entrance-corridor turning at right angles into a court off which opens a liwan. This is the house plan universally found in Doura, which is derived probably from a Mesopotamian house plan found as early as the buildings of Ur.

## 3. ON THE ROUTE OF THE TEN THOUSAND IN MESOPOTAMIA:

ROBERT A. MACLEAN, University of Rochester

## 4. THE MANTIC MECHANISM AT DELPHI: LEICESTER B. HOLLAND, Library of Congress

This paper will be published in the *A.J.A.*

## 5. THE OLDEST IMMORTALITY INSCRIPTIONS—2600 B.C.:

GEORGE S. DUNCAN, The American University

There are seventy known pyramids in Egypt on the west bank of the Nile from Abu Roash opposite Cairo to Lahun, a distance of sixty miles. Some of these pyramids, like those of Gizeh, are of enormous size, but most are modest structures. The pyramids contain no inscriptions with the exception of five at Sakkara, sixteen miles south of Cairo. They are built of limestone and contain large halls and rooms. The walls are covered with many hundred lines of religious texts chiselled from ceiling to floor. These pyramids were erected between 2625 and 2475 B.C., by Pharaohs of the fifth and sixth dynasties. The inscriptions are, however, much older, as historical allusions show that some of them reach back into the prehistoric period far beyond 3400 B.C. The inscriptions deal with hymns, incantations, magical formulae, offerings, resurrection, ascensions, future life and its nature. The most remarkable passages deal with immortality. Nowhere, in sacred or profane literature, can statements be found which teach so clearly a life after death. This is, indeed, the high-water mark of Egyptian religious teaching. The following are examples:

"The king does not die, he has become a glorious one in the horizon, he abides in continuity."

"The lifetime of the king is eternity, his boundary is eternity."

"Thou hast departed in order that thou mightest live."

"Though thou sleepest, thou wakest again; though thou diest, thou livest again."

## 6. THE ROMAN GALLEYS AT LAKE NEMI: KENNETH SCOTT, Western Reserve University

Our earliest knowledge of great Roman ships in the Lake of Nemi dates from the fifteenth century, when Cardinal Prospero Colonna enlisted the services of Leon Battista Alberti in a vain attempt to raise the hulks which had been observed by fishermen. In the middle of the next century Francesco De Marchi measured the ship nearest shore by means of a diving apparatus. A little over a hundred years ago an engineer named Fusconi made a futile essay at sacking the ship, and in 1895 Borghi, an

antiquarian, employed divers and discovered numerous bronze objects of artistic value. In the following year the naval engineer Malfatti studied the position and dimensions of the two galleys.

In 1928 the Italian government began the work of draining the lake in order to uncover the ships, one of which was laid bare in September of 1929, and the second only a few months ago. The first ship has been studied by a number of scholars, and is of the greatest importance for the light it sheds upon Roman naval construction and for its revelation of the advanced knowledge of physics and mechanics employed, as evinced by surfaces revolving on a type of ball bearings, by a water pump, stop-cock, and water-wheel of great mechanical perfection, and by an anchor of the type of the "Admiralty Anchor" adopted by the British Marine in 1852. Archaeological evidence shows that the gigantic galleys, which are larger than any ship built in the sixteenth and seventeenth centuries, were constructed by Caligula, who seems to have owned an estate at Nemi and to have been interested in the spot, while he is known to have used pleasure galleys somewhat similar to those which have been found.

THURSDAY, DECEMBER 31. 9.30 A.M.

# 1. THE RESTORATION OF THE SCULPTURED FRIEZE FROM BASSAE:

WILLIAM B. DINSMOOR, Columbia University

After noting the additional evidence which has now confirmed certain theories advanced in a survey of the temple at Bassae presented at the General Meeting of the Institute in 1927, particularly with regard to the angle of Corinthian capitals and the use of pediment sculptures, the speaker described his efforts to solve the last remaining problem, the arrangement of the sculptured frieze. The twenty-three slabs now in the British Museum, forming the complete circuit of the frieze, have been arranged in six different ways since their discovery in 1812; yet every one of these ways can be proved to be impossible, on account of discrepant measurements, collisions of the sculpture, etc. It is impossible, furthermore, to attain a solution by means of the sculptured faces of the slabs. For the present investigation, therefore, the hitherto unknown evidence of the blocks below and behind the frieze has been brought into play. At first it was hoped that comparison of the dowel holes at the bottoms of the slabs, and on the tops of the architraves, would yield definite results. But in 1930, with the permission of the Museum authorities, the cement concealing all the marks of fastenings was removed; and it was found that the pairs of dowels on the frieze slabs could not possibly have coincided with those on the architraves. At the best, only one dowel in each pair could have been utilized; but it was impossible to distinguish the used from the abandoned cuttings. The alternative was to compare the clamps on the tops of the slabs (likewise freed from cement in 1930) with the corresponding clamps on the tops of the very fragmentary frieze backers at Bassae. This very tedious process, carried out both mathematically and graphically (by the use of small scale models), has finally resulted in the elimination of every conceivable arrangement but one, which alone fits the technical evidence. And, when the blank rectangles as thus arranged are filled with their appropriate sculpture, it is seen that this, too, becomes intelligible. The paper will be published in full in *Metropolitan Museum Studies*, IV, 1931/32.

# 2. ON THE LACEDAEMONIANS BURIED IN THE KERAMEIKOS:

LA RUE VAN HOOK, Columbia University

# 3. LOST MINIATURES OF THE ROCKEFELLER MCCORMICK MANUSCRIPT:

HAROLD R. WILLOUGHBY, University of Chicago

There are fifteen lacunae in the Rockefeller McCormick manuscript at the present time. The structure of the codex shows that twenty folios have been removed. An exact observation of the number of verses of excised text enables one to compute the number of the missing miniatures. Approximately twenty-five pictorial compositions have disappeared. The subject matter of the missing text suggests the possible themes for illustration. Byzantine usage, as observed in illuminated manuscripts and other media, determines which of the possible subjects are the most probable. Miniatures in a related family of Paleologan manuscripts, and mosaics in cognate cycles of the late Comnenian period, give



detailed and realistic impressions of the style and iconography of the lost miniatures. In many instances it is possible to reconstruct missing compositions with considerable certainty.

The concluding miniature in the manuscript—a psalter frontispiece—shows that an aristocratic psalter has disappeared from the end of the codex. Liturgical psalters of the period exhibit a repertoire of eighteen psalter illustrations. This would make a grand total of approximately one hundred thirty-three miniatures for the Rockefeller McCormick manuscript in its original state. As a result of the reconstruction the codex is seen to be one of the most opulent productions of the imperial scriptorium of Byzantium.

#### 4. THE FIRST CAMPAIGN OF EXCAVATION AT BETH-ZUR (Palestine):

WILLIAM F. ALBRIGHT, The Johns Hopkins University

The first campaign of excavation at Beth-zur was carried out during the summer of 1931, under the joint auspices of the American School of Oriental Research in Jerusalem and the Presbyterian Theological Seminary of Chicago. The work was directed by Professor O. R. Sellers, with the writer's aid as archaeological adviser. The site, which is now called Khirbet el-Tubeiqah, is located four miles in a straight line north of Hebron, and was first identified in 1924. The archaeological history of the site extends from about 1800 B.C. to just before 100 B.C. Remains of the Middle Bronze Age, the three phases of the Early Iron Age, and especially of the Hellenistic Age were found. Few sites yet excavated in Palestine have yielded so much historical material in so short a time, though none of it is in any way sensational.

#### 5. THE GREAT SANCTUARIES IN CHACO CANYON:

EDGAR L. HEWETT, School of American Research

#### 6. THE CULTS OF PHERAE AND THE ARTEMIS PHERAEA GODDESS:

PAUL A. CLEMENT, College of William and Mary

Of the deities whose worship is attested for Pherae the most interesting is the Artemis Pheraea Goddess. Hellenistic and later writers know of a goddess whom they vaguely call "the Goddess of Pherae," or Artemis, or Brimo, Hecate, Persephone, or Bendis (Callimachus equates Pheraea and Artemis; Lycophron Pheraea, Brimo, and Hecate; his scholiast brings Persephone into the group; Hesychius adds Bendis, which, he says, is another name for Hecate, the daughter of Admetus). Two legends of this goddess are located at Pherae or in the neighborhood of the city. One tells how Hecate (*i.e.* the Artemis Pheraea Goddess) received the name Brimo ("the raging," "the furious") from the scorn with which she repelled Hermes' amorous advances on the shores of Lake Boebeis northeast of Pherae. The other tells of Hecate (the Artemis Pheraea Goddess), the daughter of Zeus, and of Pheraea, the daughter of Aeolus. She had been exposed at the juncture of three roads, but had been found and reared by a herdsman of Pheres. She was held in honor at Pherae, and sacrifice was made to her at cross-roads. In all this evidence one may reasonably see one Thessalian goddess, who, by whatever name she is called, remains in character the same; for all the various names have this one quality in common, indication of a chthonian mistress of the blackest magic.

Outside of Thessaly cults of this goddess existed at Sicyon and at Argus; in both places her name was Artemis Pheraea, and Thessalian Pherae was the traditional source of her cult. At Athens, too, she was worshipped (as Pheraea, though some called her Hecate), and from Acarnania comes a private dedication of the Roman period to Artemis Pheraea. But neither at Pherae nor at any other town in Thessaly is there local evidence for the worship of this goddess. The cult of the goddess Enodia, however, is very powerful in Thessaly (important cults are attested for Pherae, Larisa, Pagasae-Demetrias, Pythium, and Gopnos) and the character and functions of Enodia, who is sometimes identified with Artemis, sometimes with Hecate or Kora, are exactly similar to those we have seen in the Artemis Pheraea Goddess. The conclusion that one may draw is that the worship of this extra-Thessalian Artemis Pheraea-Brimo-Hecate-Persephone-Bendis Goddess was carried on in Thessaly, whence it spread to the rest of Greece, under none of these names, but under the name of Enodia. Recollection of the goddess' entry into Thessaly by way of Iolcus and the Gulf of Pagasae may be preserved in a

story found in Diodorus—a story which tells how Medea, coming to Iolcus, imposed upon the credulity of Pelias by palming herself off as the priestess of Artemis (in the story a goddess of the same type as Artemis Pheraea-Enodia), who is seeking to establish her cult with the most pious of kings, and him she will reward with renewed youth. So Pelias comes by his death and Thessaly enters the beginning of the long period of her characteristic reputation for sorcery.

#### 7. THE HERMES OF PRAXITELES IN POMPEIAN WALL PAINTING:

ALAN M. G. LITTLE, Yale University

The recent controversy in this JOURNAL as to the authenticity of the statue at Olympia has not taken into consideration to any extent the representations of the Hermes in Pompeii. Of the pose, six representations exist, illustrating: (a) a direct copying of the original; (b) a sentimentalization away from it to a faun type with a cupid on his arm, finally discarding the infant. The latter is illustrated by Note III, figs. 4 and 6 in Winckelmannsprogramm, Berlin, 1880, in Furtwängler, *Satyr aus Pergamon*; the former by the group in the Metropolitan Museum (G. Richter, *Sculpture and Sculptors of the Greeks*, Fig. 666), and the painting in the room off the peristyle in the House of the Ship. This painting (cf. Von Rohden, *Jahrbuch*, 1887, Vol. 2, pp. 66 ff.) is a direct copy of the statue, used pedimentally at the top of a fourth-style wall with reclining statues painted on either side. In this reproduction the drapery is included, the stump, because of the greater freedom of reproduction, omitted. The artist has followed the principle observed in copying ancient statues, e.g., the Three Graces, of giving the essential silhouette without the structural inelegancies necessitated by statuary. If the drapery existed as an essential part of the memory silhouette of the statue at this date, i.e. before 79 A.D., and is represented in natural coloring, it seems unlikely that Mr. Carpenter's suggestion (*A.J.A.* XXXV, p. 255) that the original statue of Hermes was of bronze, is correct, but that the original following the new pose which is found in all the male attributions to Praxiteles with the exception of the Eros of Thespieae, was in marble, with stump, drapery, and naturalistic coloring.

#### 8. SOME PROBLEMS OF INLAND NAVIGATION IN THE ROMAN EMPIRE (read by title):

GEORGE H. ALLEN, Lafayette College

Tacitus (*Ann.* 13.52) informs us that Paulinus Pompeius and L. Vetus (L. Antistius Vetus), commanders in Lower and Upper Germany respectively, to keep their troops busy in time of peace used them on works for improving inland navigation. Pompeius completed the dam for restraining the Rhine begun by Drusus 63 years before, in what is now Holland, while Vetus proposed to connect the rivers Moselle and Saône by a canal so as to form a continuous navigable waterway from the Mediterranean by the Rhone, Saône, Moselle, and Rhine to the North Sea. Such a project arouses curiosity when one reflects upon the limited technical resources of the times. The paper furnishes an examination of the difficult problems involved in such an enterprise. Not having locks, the Romans at times created dams with single gates or sluices, which, when closed, collected the water and, when opened, released it suddenly, forming temporarily an artificial freshet, a method used on the upper Tiber (Pliny, *N.H.* 3, 5 (9)). This process was employed in the fourteenth century between Lübeck and Lauenburg in Northern Germany. Towards the close of the Middle Ages it was in use on the Naviglio Grande in Lombardy, on the Yonne in France, and in other places. It was applied to the Lehigh River in Pennsylvania from 1819 until 1831, before the Lehigh Canal was finished (Teubert, *Die Binnenschifffahrt*, I (1912); *The Anniversary History of Lehigh County*, I, p. 374). In the case of the Saône-Moselle, however, because of the drop of 132 feet within two miles, this system could not have been of any possible use. The conception of a lock or chamber with sluices at both ends, providing for an intervening water level that can be shifted independently of the levels above and below, seems to have been suggested to the imagination of Italian engineers about 1438. We can hardly escape the conclusion that Vetus or one of his advisers conceived this same idea.

#### 9. THE ILLINOIS MINOTAUR (read by title): HERBERT N. COUCH, Brown University

This paper described a marble torso of the Minotaur which was recently acquired by the Museum of Classical Archaeology and Art of the University of Illinois. Because of the broken fragments of

iron still adhering in the lacerated throat, it may be deduced that this piece formed part of a group in which Theseus is represented as stabbing the Minotaur. A reconstruction of the group is presented, with an explanation of the details which have suggested the posture of the Minotaur. The torso probably belongs to the Hellenistic-Roman period, though the stabbing motif seems to have been older than either the clubbing or wrestling types, which complete the three motifs most characteristic of the representation of the myth in art. There are evidences of archaizing in the statue, and it is suggested that the peculiar schematic representation of the tufted hair between the horns may have some connection with the cult of the stars associated with the Minotaur under the name of Asterios or Asterion.

The paper also dealt briefly with the Oriental origin of the myth, and commented on the fact that the story is not told at length in extant literary documents earlier than the fourth century.

10. THE PROCESS OF ACCULTURATION IN A NEW MEXICO PUEBLO (read by title):

MARJORIE FERGUSON, School of American Research

11. AN UNPUBLISHED GEM IN THE JOHNS HOPKINS MUSEUM (read by title):

MARIAN GUPTILL, The Johns Hopkins University

12. SOME CURIOUS RELIEFS IN THE MUSEUM AT BUDAPEST (read by title):

GEORGIANA G. KING, Bryn Mawr College

13. PEISISTRATEIAN FORTIFICATIONS OF THE SANCTUARY AND OF THE CITY OF ELEUSIS (read by title):

K. KOUROUNIOTIS, Director of the Archaeological Service of Greece

GEORGE E. MYLONAS, University of Illinois

14. AN ATTIC GRAVE STELE IN PROVIDENCE (read by title):

STEPHEN B. LUCE, Rhode Island School of Design

15. THE ORIGIN OF CHALCIDIAN WARE (read by title):

H. R. W. SMITH, University of California

This paper is published in the *University of California Publications in Classical Archaeology*, i, 3.

## ARCHAEOLOGICAL NEWS<sup>1</sup>

### NOTES ON RECENT ARCHAEOLOGICAL EXCAVATIONS AND DISCOVERIES, OTHER NEWS

EDWARD H. HEFFNER, Editor  
University of Pennsylvania, Philadelphia

#### NECROLOGY

**Claude Anet.**—In January, 1931, Claude Anet, writer of romances, dramatist, journalist, and traveller, died at Paris. He acquired many Persian works of art in Iran and sold them to European museums and collectors.

**Thomas Ashby.**—Thomas Ashby, former director of the British School of Archaeology at Rome, was found dead along the railroad tracks between Malden and Raynes Park on May 15, 1931. Among the works of this noted authority on the topography of Latium and Rome may be mentioned *The Classical Topography of the Roman Campagna* (1902), *The Roman Campagna in Classical Times* (1927), and the *Topographical Dictionary of Ancient Rome* (1929), which was written by S. B. Platner and revised and completed by Ashby.

**Marquis Joseph De Baye.**—The Marquis Joseph de Baye, former president of the Société

<sup>1</sup> The department of Archaeological News and Discussions and of Bibliography of Archaeological books is conducted by Professor HEFFNER, Editor-in-charge, assisted by Professor SAMUEL E. BASSETT, Professor CARROLL N. BROWN, Miss MARY H. BUCKINGHAM, Professor SIDNEY N. DEANE, Professor ROBERT E. DENGLE, Dr. EDITH HALL DOHAN, Dr. VLADIMIR J. FEWKES, Professor JOHN W. FLIGHT, Professor HAROLD N. FOWLER, Professor HENRY S. GEHMAN, Mr. E. BIÖREN GETZE, Dr. STEPHEN B. LUCE, Professor RALPH VAN DEMAN MAGOFFIN, Professor CLARENCE MANNING, Professor ELMER T. MERRILL, Professor JOHN C. ROLFE, Professor KENNETH SCOTT, Professor JOHN SHAPLEY, Professor EPHRAIM A. SPEISER, Professor FRANCIS J. TSCHAN, Professor AXEL J. UPPVALL, Professor SHIRLEY F. WEBER, Professor FRED V. WINNETT, and the Editors.

No attempt is made to include in this number of the JOURNAL material published after December 31, 1931.

For an explanation of the abbreviations, see Vol. xxxiv, 1, p. 124 and Vol. xxix, 1, pp. 115-116.

des Antiquaires de France, died in June, 1931, at the age of 78. An active explorer and excavator, he had many interests, but he was especially devoted to prehistoric archaeology and art during the period of the Franks. He was interested in and wrote on art in Russia, Norway, and Sweden. Besides numerous articles, he is the author of two important books: *L'Archéologie Préhistorique* (1880-88), and *L'Industrie Anglo-Saxonne* (1889).

**Charles Butin.**—The greatest connoisseur of ancient arms and armor, Charles Butin, died in February, 1931, at the age of 75. He was the author of *La Masse d'armes de Bayard* (1895).

**Otto Cartellieri.**—Otto Cartellieri, the noted mediaevalist, died in 1930. Among his publications are his dissertation on Suger (1898), a book on Peter of Aragon and the Sicilian Vespers (1904), another on King Manfred (1910), and numerous books on the history of the Dukes of Burgundy.

**Roger Vallentin du Cheylard.**—Roger Vallentin du Cheylard, President of the Société Archéologique de la Drôme and keeper of the library of the Museum of Montélimar, died in April, 1931, at the age of 69. He was the author of articles dealing with Roman and modern numismatics and with the prehistory of his region.

**Gaston Deschamps.**—Gaston Deschamps, born at Melle in 1861, died on May 15, 1931. As a student at the French School in Athens, he had in his earlier years explored Greece and parts of Asia Minor and had discovered two inscriptions of great importance, the letter of Darius I and the series of texts from Panamara. Later he was active as a journalist, literary critic and politician. He served as vice-president of the Alliance Française.

**Hermann Dessau.**—Hermann Dessau, Professor at the University of Berlin, died in 1931. His death is a great loss to Latin epigraphy and to Roman history. He was the principal author of



the *Prosopographia Imperii Romani*, and to him are owed the fourteenth volume of the *Corpus Inscriptionum Latinarum*, the supplements to volumes VIII and XIV, and his important *Inscriptiones Latinae Selectae* (1892-1916). He had begun a history of the Roman Empire, of which two volumes had appeared.

**Félix Durrbach.**—Félix Durrbach died at Toulouse, where he was dean of the Faculté des Lettres, in May, 1931. His activity in the fields of archaeology and Greek epigraphy is attested by his articles in *B. C. H.*, by his *Choix d'inscriptions de Délos* (1921), and his labors in the task of the publication of the inscriptions of Delos for the Académie des Inscriptions.

**Doctor Épery.**—In 1931 occurred the death of Doctor Épery, who was active in excavation near Alesia and elsewhere and who gave especial attention to Celtic and Gallo-Roman studies. He was the compiler of important bibliographical material on matters pertaining to the Côte-d'Or.

**Paul Gruyer.**—Paul Gruyer, archaeologist and historian, died at the end of October, 1930. He was Secretary general of the *Société des Amis de Marly*, and author of books on Versailles, Saint-Germain, the stone crosses (*calvaires*), and fountains of Brittany.

**August Heisenberg.**—August Heisenberg, Professor at Munich, collaborator of Krumbacher, and, after him, director of the *Byzantinische Zeitschrift*, died at the end of 1930 at the age of 61. Among his writings may be mentioned his *Grabeskirche und Apostelkirche* (1908).

**W. R. Lethaby.**—W. R. Lethaby, architect of Westminster Abbey since 1906, died at London in July, 1931, at the age of 74. He was the author of works on Greek, Roman and Gothic architecture.

**A. A. Macdonnell.**—A. A. Macdonnell, former professor of Sanskrit at Oxford, died in December, 1930, at the age of 76 years. Among his important works are his *Sanskrit Grammar* (1886), his *Vedic Dictionary* (1892), his *Vedic Grammar* (1916), and his *Vedic Chrestomathy* (1917), his *Vedic Mythology* (1897), his *Sanskrit Literature* (1900), and *India's Past* (1927).

**Gustave Macon.**—The Musée Condé at Chantilly has three keepers *honoris causa*, but its actual keeper, Gustave Macon, died at Paris on October 31, 1930. As former secretary of the Duc d'Aumale, he had obtained much valuable information from the founder of the collections about their formation and history.

**Orazio Marucchi.**—Orazio Marucchi, professor of Christian archaeology at the University of Rome, director of the Christian and Egyptian Museums of the Vatican, *scrittore* of the Vatican Library, and member of the Pontifical Commission of Sacred Archaeology, died at Rome at the age of 79 in January, 1931. Marucchi wrote many books, especially on Christian Archaeology and Roman topography, and from 1898-1922 he directed the *Nuova Bollettino d'Archeologia Cristiana*.

**A. P. Maudslay.**—A. P. Maudslay, born in 1850, died on January 23, 1931. He had carried on exploration in Central America. He wrote *A Glimpse of Guatemala* (1899), and translated the *Historia Verdadera* of Bernat Diaz (1908-12).

**Lord Melchett.**—The English chemist, politician, and philanthropist, Lord Melchett, died in December, 1930, at the age of 62. His collection of antiquities has been published by Mrs. E. Strong.

**Gaston Migeon.**—On October 29, 1930, occurred the death of Gaston Migeon, former *Conservateur des objets d'art* of the Louvre. His most important contributions are his *Manuel d'art Musulman* and catalogues of various collections.

**Adrien de Mortillet.**—Adrien de Mortillet, professor at the École d'Anthropologie, and Honorary President of the Société préhistorique de France, died at Paris on July 20, 1931, at the age of 76. He was the collaborator with his father in *Musée préhistorique* (1881), and *Le Préhistorique* (3 ed. I, 1900).

**Theodore Noeldeke.**—Theodore Noeldeke, distinguished Orientalist and professor at Göttingen, Kiel, and Strassburg, died at Karlsruhe, toward the end of 1930, at the age of 94. A complete list of his publications up to 1906 may be found in the *Orientalische Studien Th. Noeldeke gewidmet* (1906).

**Edward Robinson.**—Edward Robinson, once director of the Boston Museum and for the last twenty years director of the Metropolitan Museum in New York, died in the latter city on April 18, 1931. From 1893-1902 he had lectured on Classical Archaeology at Harvard.

**Wilhelm Spiegelberg.**—Wilhelm Spiegelberg, famous Egyptologist and professor, first at Strassburg and later at Munich, died in December, 1930. Among his important writings is his *Koptisches Handwörterbuch*.



**Akos von Szalay.**—Akos von Szalay, a young Hungarian architect, died in September, 1931. He had taken part in the German excavations at Pergamum (1927), where he discovered the arsenal of the Attalids.

**Sir Richard Temple.**—Lieutenant-colonel Sir Richard Temple died at Territet, in February, 1931, at the age of 80. His military and civil career was in India, Indo-China, and Afghanistan. For many years he published the *Indian Antiquary*, and was the author of a work in three volumes, *Legends of the Punjab* (1893-90), and of several voyages of Europeans in India in the seventeenth century for the Hakluyt Society and Indian Record Series.

**Georg Wissowa.**—Georg Wissowa, Professor at the University of Halle and famous Latinist and Archaeologist, died in June, 1931, at the age of 72. He was the author of many works, among which is his *Religion und Kultus der Römer*. From 1892 to 1913 he directed the re-editing of the *Lexikon* of Pauly, to which he contributed important articles, as also to Roscher's *Lexikon der Mythologie*.

**Heinrich Zimmern.**—The great architect, Heinrich Zimmern, professor at Leipzig, died in February, 1931, at the age of 70. Among his works are *Babylonische Busspsalmen* (1895), *Beiträge zur Kenntnis d. babyl. Religion* (1896-1901), *Vergl. Gramm. der Semit. Sprachen* (1898), *Keilinschr. und das A. T.* (with Winckler) (1912), *Sumerische Kultlieder* (1912), *Leipzigersemitische Studien* (with A. Fischer) (1903).

## PREHISTORIC AND ORIENTAL EGYPT

**Anibe.**—At this site, in Nubia, Professor GEORG STEINDORFF, of the University of Leipzig, has during the past year carried out important investigations, some of which he began in 1912 to 1914. The region studied will soon be inundated by the raising of the level of a dam. The important cemetery, which dates back as far as 2000 B.C., yielded about 1,000 graves, circular stone cairns arranged in a pit. Ornaments and pottery were found among the human remains. Much light was shed on the methods of constructing an Egyptian fort.

**Cairo.**—**A New Fragment of Greek Music.**—A small square of papyrus (12 x 13 cm.), which came to the Cairo Museum with some Zenon papyri, bears on one side parts of three lines of Greek text with letters of musical notation above

the syllables. It may be important in the study of the history of Greek music, since the circumstances of its acquisition and the style of the letters point to a date of about 250 B.C., which is at least a century earlier than any other known Greek musical writing. The words of the text, apparently from a tragedy, may be older still, possibly from Euripides. The musical notation is not strictly consistent with either the diatonic, the chromatic, or the enharmonic scale, but seems to be a combination of two. As no metrical symbols are given, the vowels may be presumed to have their normal values. J. F. MOUNTFORD, *J. H. S. li* (1931), pt. I, pp. 91-100.

**Giza.**—SELM HASSAN has continued his excavations near the Sphinx, and in addition to the objects previously reported (*The Ill. Lond. News*, Feb. 21, 1931) he has found two tombs of the Old Kingdom, that of Wpemnefert and that of Nemaatre (*The Ill. Lond. News*, June 20, 1931, p. 1061 (7 figs.)).

**Meydum.**—Excavations by the University Museum, Philadelphia, were continued under the direction of Mr. ALAN ROWE during the season 1930-31. Of great interest is the finding of a sarcophagus chamber in a mastabah some distance from the great pyramid. The chamber was completely lined with masonry blocks, and on three of the walls were inscriptions reading: "The King's Son, Ny-hep." In the southern chamber of the large mastabah adjoining the pyramid was found a massive red granite sarcophagus dating from the Fourth Dynasty. The sarcophagus is entirely intact and complete with a granite lid, and is considerably larger than the great sarcophagus of Cheops; it has not been determined whose tomb this was. Extensive work was done in a Graeco-Roman cemetery, important by reason of the evidence it affords of the considerable population existing at Meydum in Roman times. It is interesting to note that in these burials the funerary objects were placed as a rule not in the *loculi*, but in the passages or halls, which were doubtless used as apartments for funeral repasts on days sacred to the worship of the dead. *University Museum Bulletin*, April, 1931; a detailed report will appear in the *Museum Journal*. Work has been resumed at Meydum for the season 1931-32.

**Tell El Amarna.**—In *The Ill. Lond. News*, Sept. 5, 1931, pp. 366-367 (10 figs.), J. D. S. PENDLEBURY writes about the work of the Egypt Exploration Society's Expedition to Tell el

Amarna, where activity was centered on the clearing of the northern suburb. Much information was derived bearing on details of construction and decoration. A very beautiful blue brick with lotus design was found in the work on mounds to the north. Among the architectural members is an elaborate and elegantly colored lintel over the door of a main room. The houses and Great Wall at the northern end of the site proved very extensive. In addition to the very considerable knowledge about matters architectural there was also gathered up a variety of significant objects, rings, knives, saws, axes, figurines, amulets, pendants, etc.

#### ASSYRIA AND BABYLONIA

**Fara.**—In *Mus. J.* xxii, 3 (24 pp.; 27 pls.), ERICH SCHMIDT reports that the culture strata discovered at Fara correspond to the three broad culture horizons of Mesopotamia: the Jemdet Nasr, the Early Sumerian, and the Period of the Third Dynasty of Ur. Painted jars and scaraboid seals defined Fara I; plain bowls, characteristic pitchers and cups, and cylinder seals (including the Gilgamesh motive) defined II, which was separated from I by an inundation deposit; elaborations such as offset bowl rims, and seals symbolizing the seated deity, foreign to earlier patterns, characterize III. I has not yet been represented by written records; the tablets of II belong to the last sub-phase (twenty-ninth to twenty-seventh century). Two tablets found in III bear directly on the identification of Fara with ancient Shuruppak and check with the finding by Koldewey (in 1902-03) of frequent references to the name "Sukurru" and of an inscription referring to "Haladda, Patesi of Sukurru."

**Nineveh.**—R. CAMPBELL THOMPSON reports (*The Ill. Lond. News*, June 27, 1931, pp. 1120-1121 (12 figs.)) on the discoveries at Nineveh made by him and his associates during the season of 1930-31. The Temple of Ishtar has been definitely identified, and also some important smaller objects have been found, including pottery and metal-work. A life-size bronze or copper head of a man is described as a fine piece dating at about 3000 B.C.

**Susa.**—Excavations of 1930-31.—In *Antiquity*, v, 19 (1931), pp. 330-343 (16 figs.), R. DE MECQUENEM states the results of the excavations on the acropolis and the summit of the "dungeon." An important discovery is that of four wooden

shields which had hide covers fastened with copper nails and short copper rods as handles.

**Tell Billa.**—In *University Museum Bulletin*, iii, 2 (Dec. 1931), pp. 59, 62 (pl. X), E. A. SPEISER reports on the work of the University Museum, Philadelphia-Baghdad School Expedition during the early weeks of the 1931-32 season at Tell Billa, Iraq. Three burials of the Hurrian period (about the middle of the second millennium B.C.) have been found; in one was a complete painted cup represented by only a single intact specimen last season. A painted pottery censer, decorated with typically Hurrian birds, was lying on a model shrine of terra cotta which rested on a stone foundation. Terra cotta plaques and a mould were also Hurrian; the former represent figurines of bearded men in Anatolian tunics. The work will continue throughout the winter.

**Tello.**—In *J. Asiat.* ccxvii (Jul.-Sept. 1930), pp. 1-40 (6 figs.) H. DE GENOUILLAC gives a day-by-day record of operations during the 1929 Spring campaign at Tello (ancient Lagash). Owing to previous excavations by de Sarzec and Cros between 1877 and 1909, and several successful but ill-contrived cuttings by Arabs, principally in 1924, de Genouillac's prospect was a discouraging one. But his work is proving valuable, confirming many of de Sarzec's findings, altering others, and carrying forward a more accurate and exhaustive project than heretofore possible. Articles of pre-Sargonic date were found in abundance and many from Gudea's time. More than two thousand objects were unearthed, but no such trophies came to light as de Sarzec's vulture-stele and Gudea cylinders or Cros' statue of the young prince. One significant discovery was that the "palace of Gudea" (as de Sarzec had called it) was neither a palace nor a construction by Gudea, but the work of an Aramaean dynasty of the Alexandrian period, as indicated by the presence here and there in the walls of bilingual (Aramaic and Greek) inscriptions on bricks. The building was constructed by Adad-nadin-ahê who re-employed materials from Gudea's palace.

**Tepe Gawra.**—The University Museum, Philadelphia, Baghdad School, and Dropsie College participated in the first season at Tepe Gawra which is reported by E. A. SPEISER in *B.A.S.O.R.* 43 (Oct. 1931), pp. 19-21. Three main civilizations were revealed; the topmost, which was completely disclosed, marks the transition from the eneolithic age to the period of metal.

After seven successive strata of this period, the mound was apparently abandoned from lack of space. Stratum six is a copper-using period (first half of third millennium B.C.); the objects were notable for variety as well as skill of manufacture. Numerous snakes of copper and bronze indicate Shakan as a principal deity. A number of game pieces included a pair of dice. Terra cotta figurines were numerous; one represented Ishtar; several were horses, heretofore believed not to have been introduced in Mesopotamia until the second millennium. Numerous weights were marked with weight units. The pottery was without ornamentation, except for some incised ware; handles were generally absent. Notable was a bronze ladle with long handle. The town of the sixth stratum followed a careful planning scheme; the houses were grouped along two streets, crossing at right angles, which had stone drains and paving. The preceding period was characterized by buildings exclusively of burned brick.

Upon resumption of activities for the season 1931-32, excavations were extended in the area of a fourth stratum shrine, in which was a massive stone altar. A censer was discovered similar to the one recently found at Tell Billa, but earlier. Under the stone floor were sixteen jars, of different sizes and with lids, evidently foundation offerings. The shrine consisted of two rooms and followed the outlines of a large room of the preceding period which lacked a dividing wall. Excellent cylinder seals were numerous; limestone figurines, an axe-head, and stone weights were also found. Work will continue throughout the winter. (*University Museum Bulletin*, iii, 2 (Dec. 1931), pp. 62-63.)

Ur.—In addition to the finding of the Royal Tombs of the Third Dynasty and the private chapels and wayside shrines, reported in *A.J.A.* xxxv, 3, p. 326, the 1930-31 season was noted for extensive excavation of the residential district, of the Larsa and Neo-Babylonian periods, in the south-east quarter of the city. (It was here that the four wayside shrines were found.) Town planning was absent; the streets were narrow and unpaved, the houses crowded together. They conformed generally to one type with central court entered from a lobby and surrounded by the living rooms, with a stairway to the upper floor. In addition to the residences were shops, and also one house, a combined residence and school, in which were found several hundred tablets. In

another house was a fragmentary tablet elucidating the conjugation of the Sumerian verb, with the equivalent in the Semitic language of Babylon.

Further excavation of the Harbor Temple revealed that what was formerly thought to be the building proper was, in fact, the foundation of a building which had disappeared; an example of the "ush" illustrated elsewhere at Ur by Bur-Sin's temple of Nin-Gal.

Adjoining the Harbor Temple there was found a palace built by Nabonidus for Bel-shalti-nannar. Its great size and ground plan are strikingly similar to the palace at Babylon, though the more intimate features of the ground plan have a closer connection with the house of Merkes; this would be in accordance with the supposition that the Ur building was the residence not of the king but of the king's daughter. C. Leonard Woolley's complete report of the season is in the *Museum Journal*, xxii, 4 (35 pages; 13 plates), and in the *Ant. J.*, xi, 4. The tenth season (1931-32) is now in progress.

#### SYRIA AND PALESTINE

**A New Oriental Journal.**—Of considerable interest to readers of the *A.J.A.* and of especial interest to Orientalists will be the appearance of the new *Quarterly of the Department of Antiquities in Palestine*, the first issue of which appeared in 1931 (52 pp.; 32 plates; subscription rate 18/6, published by the Oxford University Press).

The purpose of the *Quarterly* according to the Introduction is "to publish: (a) any discoveries resulting from excavations carried out by the Department, or from other methods of research, or that come to light in a more accidental manner in the course of the Department's ordinary administrative work; (b) notes upon such antiquities in the Department's Museum, or elsewhere in Palestine, as have not already been published; (c) texts and translations of texts describing historic monuments and sites; (d) general news of archaeological work in Palestine."

One section of the *Quarterly*, entitled *Satura Epigraphica Arabica*, is to be devoted to the editing of "Arabic inscriptions both unpublished and inadequately published, of which photographs or squeezes have been deposited in the Records Office of the Department of Antiquities."

Among the articles appearing in this first number of the *Quarterly* are: *Notes on a Cemetery at Karm al-Shaikh, Jerusalem* (with 15 plates of articles found in the graves); *A Hoard of Phoeni-*

*cian Coins* found at Tell Abu Hawwam in 1930 (with photographs of some); the first part of a description of the *Castle at Ajlûn*, west of Jerash, built in 1184-5 by one of Saladin's amirs (7 plates); the first part of a translation of *A Mediaeval Arabic Description of the Haram of Jerusalem* found in the *Masâlik al-absâr* by Ahmad b. Fadl-Allâh al-'Umari.

**Résumé of the Latest Archaeological Discoveries.**—In *Exp. Times*, xlii (1931), pp. 522-525, J. W. JACK presents an able and interesting survey of the work carried on during the past year at Jericho, Tell Beit Mirsim, Gaza (Tell Ajjûl), Megiddo, Hamath, Transjordan (Teleilat Ghas-sûl, Jerash, Ammân) and the Shittim valley south-east of the Jordan (Tell Bileibil, Tell Kefrein, Tell er-Râmeh), and Nineveh. Mention is made also of the work of Miss Garrod, Mr. Turville Petre and M. Neuville in trying to fill in the gap in the pre-history of Palestine between the Early Bronze and Late Paleolithic Ages, and the discovery by Miss Garrod of what she calls a "Natufian" culture in Palestine, thus bridging the transition from Mesolithic to Neolithic.

**Ain Shems.**—In *Pal. Ex. Fund*, July 1931, ELIHU GRANT writes about the work at this site. Ain Shems (Beth Shemesh) is redolent of older Canaan. Its population was, in all probability, always Canaanite, whether the masters were one foreigner or another, for one or several hundred years. It was successively dominated by Hyksos, Egyptians, Philistines, and Hebrews. It was destroyed by the Babylonians under Nebuchadnezzar II about 600 B.C.

**Alexandretta.**—FATHER PAUL CHAMMAS reports the discovery of a few beautiful mosaics near Alexandretta. The best of these works shows Amphitrite and her wedding to Poseidon; another may be the deification of Semiramis. (*The Ill. Lond. News*, Aug. 15, 1931, p. 265 (2 figs.).)

**Beth-Shan.**—GERALD M. FITZ GERALD reports (*The Ill. Lond. News*, Oct. 3, 1931, pp. 530-531 (6 figs.)) on certain of the recent discoveries at Beth-shan, especially on the mosaic floors of the sixth century A.D., which are, indeed, elegant. One of these mosaics shows emblematic figures of the sun and the moon in the centre with similar representations of the months; two others are instructive by reason of the ways in which they illustrate the life of the times by means of animals, birds, and otherwise.

The 1930-31 season was reported briefly

in *A.J.A.*, xxxv, 3, p. 327 and at length in *Pal. Ex. Fund*, lxi (1931), pp. 59-70 (6 plates). The 1931-32 season has now been begun by the University Museum, Philadelphia. G. M. FITZ GERALD reports the finding of a considerable structure which seems to have been a tower, now much ruined. Nearby are the remains of an entrance gateway to the ancient fortress; the masonry resembles that of the Israelite Palace at Samaria and is of a type rare at Beisan. An area at the northwest of the summit was excavated in three levels, revealing walls of the time of Seti I and stone fragments with inscriptions and a seal of Rameses II. In the lowest level of this area two large column bases have been found *in situ*, but the nature of the building has not yet been determined. Excavations in the cemetery have been continued; most of the graves are *loculi*; a Bronze Age tomb had the characteristic circular shape and domed roof. (*University Museum Bulletin*, iii, 2 (Dec. 1931), pp. 66-67 (pls. XI & XII). Work will be continued throughout the winter.

**Jerusalem.—Jewish Ossuaries.** In rock-cut chamber tombs in many places in Jerusalem, stone chests, from one-half to three-quarters of a meter in length, have been found, which were evidently used to contain the bones of bodies displaced from the *loculi* when these were needed for later burials. They are usually made of soft stone, and the simple decoration of the front long side is imitated from wood technique, which with other evidence shows that such chests were originally made of cedar wood. The covers, whether flat, gabled, or saddle-shaped, are left plain. Traces of painting in India red or yellow are sometimes found, as well as inscriptions in Hebrew, Aramaic, and occasionally Greek. The two rosettes which always appear in the decoration may be symbolic, like the eyes of Osiris, but are more probably a tradition from the stars of Ishtar, goddess of life and death. What little has survived of the original offerings (coins, vases, ornaments, etc.) is Hellenistic and early Roman, and suggests a period at the beginning of the Christian era. (E. L. SUDNIK, *Arch. Anz.* 1931, pt. 1/2, cols. 309-316; 4 figs.)

**Kerazeh.**—In *Pal. Ex. Fund*, July 1931, F. TURVILLE PETRE reports on the excavation of a dolmen necropolis near this site in Galilee. Twenty-four dolmens constitute a series of burials beginning two kilometres north of Tell Hum and the northwestern shore of Lake Galilee and ex-



tending sporadically for four and one-half kilometres to the north and about three kilometres to the east. They are built of basalt on high eminences and afford a view of the Lake.

**Samaria.**—In *Pal. Ex. Fund*, July 1931, J. W. CROWFOOT reports on the Joint Expedition to Samaria-Sebustiya. A portion of the old Israelite city wall has been discovered, but no remains earlier than Omri have been found, which suggests that the Old Testament account that Omri founded the city is correct.

**Teleilat Ghassûl.**—Excavations of the Pontifical Biblical Institute.—In *Biblica*, xii (1931), pp. 257-270 (map; 4 pls.; 16 figs.) A. MALLON reports the resumption of the Papal excavations for the third campaign at Teleilat Ghassûl, in the Jordan valley northeast of the Dead Sea. The object of this campaign was to establish the depth and stratification of the ruins, and shafts were sunk to natural soil in several places. Four levels of occupation were discovered, the earliest of which goes back to the Late Stone Age and Early Bronze, while the latest or fourth level attests the transition to the Middle Bronze Age. Unity of civilization was found on the site at all levels, evidencing a continuous occupation from foundation to final destruction. There were two contemporaneous sister cities located on two tells separated by a wide depression. About the same distribution of inscribed objects was found on all levels, and writing appeared on all sorts of objects: vases, bowls, bricks, stones, arms, and instruments; primitive scratches in which the straight line predominated. There is, according to Mallon, no question of dependence upon, or influence by, Egyptian hieroglyphs, and though there may be some resemblances to the archaic cuneiform of the third millennium, the differences are enormous. Yet the relation is valuable, for the Ghassulian civilization seems to spring from Babylonian or Susian origins. In accordance with the classification evolved by Sir Arthur Evans in his study of Minoan writings, the signs found on objects at Ghassûl lend themselves to a grouping under three categories: pictograms or symbols, hieroglyphs or conventional pictograms, and geometric signs. Indeed Mallon finds that the comparison with Minoan writing is very intriguing. But the repertory of signs found at Ghassûl is meagre and is limited to the expression of a very simple round of ideas. Yet the attempts made by this people of the third millennium to record their thoughts are worthy of

interest. These men appear to have been on the way to great progress when suddenly they were wiped out by a terrible catastrophe.

**Tell el 'Ajjûl.**—At this site, which the excavator believes should be regarded as Old Gaza, a few miles from modern Gaza, Sir FLINDERS PETRIE has recently made additional discoveries (*The Ill. Lond. News*, June 20, 1930, pp. 1050-51, 9 figs.) which strengthen the idea of the importance of this ancient site along the avenue of intercontinental communication. Arrow heads, pottery imported to this place from Cyprus and elsewhere, gold jewelry, were found, as well as numerous sections of streets and buildings.

#### ASIA MINOR

**Küchük Köhne.**—In *Num. Notes*, No. 46, E. T. NEWELL analyzes and describes the contents of an earthenware pot discovered in this little hamlet in the early part of 1930. The find belongs to the latter half of the fourth century B.C. and consists of twenty-eight silver coins. The coins were struck in the mints of Sinope, Amisus, and Tarsus, and, with the exception of the test-cuts made in some of them in antiquity to investigate the quality of the metal, were in excellent condition when found. Mr. Newell would place the burial of the hoard at about 322 B.C. The collection offers an indication of just what kinds of money constituted the most acceptable media of exchange in central Anatolia before the current coinages were swamped by the ubiquitous Alexander types.

#### CLASSICAL

##### GREECE

**Archaeology in Greece, 1929-1931.**—G. KARO's comprehensive, illustrated surveys of archaeological work in Greek lands in 1929-30 and 1930-31, with sections on Attica, Boeotia, Phocis, Peloponnese, Epirus, Ionian Islands, Thessaly, Macedonia, Islands of the Aegean, Crete, the Dodecanese, are published in *Arch. Anz.* 1930, pt. 1/2 (cols. 88-167; 33 figs.) and 1931, pt. 1/2 (cols. 211-308; 39 figs.). Among the points noted in Attica are: The completion of the tentative restoration of the north side of the Parthenon and the beginning of that at the S. E. corner; the recognition by the head of the American school that a part of a seated marble figure that has stood for years in the forecourt of the Acropolis Museum belongs to the West Pediment of the



Parthenon; the discovery on the north slope of the Acropolis of a small shrine of Eros and Aphrodite, the only one known on the mainland dedicated to Eros, with inscriptions of the middle of the fifth century and evidence of religious use from prehistoric to late Roman times; the recovery from the mud of Piraeus Harbor of a ship-load of ancient marble copies (time of Hadrian) of older works of sculpture, including the figures on the shield of Athena Parthenos arranged in pairs in rectangular panels, and from the bed of the Ilissus, of a fine torso of a youth, from the first years of the fifth century; the complete excavation of the Pnyx, showing its changing forms and uses at different epochs; the beginning of the excavation of the Greek Agora; the discovery in the Ceramicus of the grave, with inscription and thirteen skeletons, of the Lacedaemonians who fell in battle against the Athenian demos on this spot in 403 B.C., as related by Xenophon (*Hell.* II. 4. 33); on the road to the Academy, tombs of prominent families of the fourth to the second century B.C. who were honored by burial here, also a square basis with variants of the Dexileus relief on three sides. In the Mycenaean Cadmeia at Thebes, fragments of wall-paintings were found and excellent specimens of the half-timber construction of the walls. At Olympia, excavations under and around the Heraeum show that two-horse chariots competed here in the second millennium B.C., that a temple without colonnade was built on this site in the eleventh century, while the existing temple dates from the ninth century, its original wooden columns having been replaced by stone columns as they decayed, from the seventh century on. At Corinth, besides important discoveries in topography, architecture, and sculpture, the graves in the northern necropolis, beneath which are Neolithic remains, have yielded a complete, unbroken series of vases of local manufacture, from Early Helladic to Hellenistic and even to Roman times. In many other places, all over the country, evidences are coming to light of the Neolithic and early Bronze Age habitation. The cavern of Luisi, on the western coast of the island of Ithaca, was a religious shrine from the middle of the third millennium B.C. down to the time of Christ, with a variety of divinities, including Odysseus. Near Porto Timone, on the N. W. coast of Corfu, a Neolithic fishing village yields incised black polished ware with resemblances both to that of Leucas and that of Apulia, while nearby is a small fort apparently built by

Pyrrhus in connection with his invasion of Italy in 280 B.C.

**Résumé of Greek Epigraphy.**—In *R. Ét. Gr.*, xliii, 200/201 (April-June 1930), pp. 182-217, P. ROUSSEL (with the assistance of MM. Béquignon and Derenne) presents an excellent summary of the work in epigraphy for the preceding year.

**Athens.**—The head of a helmeted Athena has recently been found on the southern side of the Hill of the Pnyx. The work is believed to belong to the latter half of the fifth century B.C.

**Corinth.—Perachora.**—Recent work by the British School in continuation of earlier investigations has yielded gratifying results. The deposit of votive offerings to Hera has been further explored. Quite a few objects in ivory and a large number of bronze figures have been added to those previously found. These together with works of sculpture illuminate Corinthian activity in the seventh and sixth centuries. Light is shed on Egyptian connections by the discovery of Egyptian objects which are rare on the Greek mainland. (H. PAYNE, *The Ill. Lond. News*, pp. 850-854 (19 figs., 3 in colors).)

**Cnossus.**—In *The Ill. Lond. News*, Sept. 26, 1931, pp. 485-489 (14 figs.), is given a brief report by Sir ARTHUR EVANS of the main features of a temple-tomb at Cnossus, the discovery of which was said to have been made through the clue furnished by the finding of a beautiful signet-ring.

**Erchia.—A Dedication to Agreus.**—In *Polemon*, i (1929), pp. 40-41, I. K. DEMETRIOS describes a small marble stele found at Erchia in Attica, with an inscription in honor of a god with the epithet Agreus, probably Bakchos or Pan.

**Hymettus.—Pelagian Settlement.**—In *Polemon*, i (1929), p. 192, A. PALAIOS reports the discovery by himself and M. Arvanitopoulos of numerous houses belonging to a Mycenaean settlement on the left of the ravine called Gyris-mou; behind it are heights of Hagios Nikolaos. This is regarded as the Pelagian settlement at the foot of Hymettus mentioned by Herodotus (VI. 137).

**Pherai.—A Statuette of a Warrior.**—A bronze statuette of a hoplite, or possibly of Ares, found in excavations at Pherai, is described by A. S. ARVANITOPOULOS in *Polemon*, i (1929), pp. 57-60 (2 figs.). The warrior, wearing cuirass, tall-crested helmet, and greaves, stands erect; his

right arm was raised and held a spear; the left hand, near the waist, grasped an object of cylindrical shape. The style recalls archaic works of the Argive-Sicyonian school. The statuette is to be dated about 500 B.C.

**Phrati.**—DORO LEVI reports (*The Ill. Lond. News*, Dec. 26, 1931, pp. 1042-1044 (17 figs.)) on work recently carried out in the necropolis of Phrati in central Crete, where tombs, mostly of the single-burial type, with funeral furniture, such as perfume jugs, personal ornaments, and votive offerings, have been found. Most notable among the "finds" is the pottery. The shapes and decorations show influences from late Minoan types and also reflect commercial relationships with Rhodes, Cyprus, and other places. Proto-Hellenic characteristics, as well as orientalizing Geometric features are found. Cretan Geometric pottery is reported as being well illustrated by these finds at Phrati. The importance of Crete in the tradition of Greek art is emphasized.

**Piraeus.**—In *C. R. Acad. Insc.* July-Sept. 1929, pp. 195-199, is reported (from Polemon, i (1929)) an inscription discovered near the Piraeus on the right bank of the Cephissus. The inscription deals with the komos. Its value in a discussion of the komos of the City Dionysia is notable and lends support to the theory of P. Foucart that the komos is a contest apparently distinct from the dramatic and dithyrambic contests. The term komarkhos, the first certain example in an inscription, evidently implies a function. The vase by Euthymides at Munich (cf. Furtwängler-Reichhold, *Die griechische Vasenmalerei*, p. 65; pl. XIV) we may now be permitted to believe gives a representation of a person charged with this function.

**Thasos.—The Ancient Ruins, especially the Hellenic Towers.**—In *B. C. H.* liv (1930), pp. 147-194 (17 figs.; pls. VIII, IX) A. Bon describes the archaeological exploration of the island, that has gone on simultaneously with the excavation of the ancient city of Thasos. This exploration shows that the island must have been very densely populated in antiquity, probably three or four times the present 15,000. A map is given, showing ancient and modern villages, and the towers that are to be found scattered over the island. The ancient city was at the N. E. end of the island, in order to be near the mainland, and covered a very large area, while its cemeteries lay outside the walls. The bulk of the article then takes up

the tour of the island, beginning at the east coast, and working round to the south and west. The principal extant vestiges of ancient occupation on the coasts are terraces for holding the soil for cultivation, and remains of quarries or mines, the former for marble, which is of a very fine quality, the latter principally for copper. Towers also exist along the coast and at the entrances to the interior of the island. Some of these are obviously lighthouses, and one of these is proven to be such by an inscription found on the spot. The principal towers are at places now called Saliari, Helliniko, Gravoussa, Loutro, Aliki, Theologo, and Hevraio. These towers are nearly all provided with courts which adjoin them. Various ancient settlements on the island are identified by funerary inscriptions and reliefs. The towers seem to date, for the most part, in the end of the fourth and the beginning of the third century. Similar towers are found on numerous Aegean Islands, and, on the mainland, in Attica and the Megarid. They were doubtless built for protection against pirates, for piracy played an important rôle in antiquity, and was not finally stamped out until the beginning of the last century of our era. The towers were built, not only to guard unwalled villages, or mines and quarries, but to command the roads from the coast into the interior. The courts mentioned above were for the protection of flocks and herds. From these towers signals of flames for help could be made, not merely from tower to tower, but, in some cases, from island to island.

**Thera.—Archaic Sculpture.**—Fragments of three very archaic statues have recently been found in an isolated spot in the southern part of the island of Santorin. The best preserved piece is the upper part, with head, of a koré statue, over life-size, closely resembling the Nicandra from Delos in the National Museum in Athens. It has the same style of hair hanging in long parallel bands down the back and over each shoulder. The other two fragments are a still more imperfect piece of another koré and the upper part of a very crude statue of a youth(?) with triangular chest and locks hanging on the shoulders. Other statues may be buried in the pumice stone with which the hillside is covered. It is not clear whether these are funeral or votive statues. They may come from the primitive shrine with temenos, of which a niche for Demeter and Koré is preserved, or, more probably, from a rock-cemetery on the southern slope of the citadel.

(F. J. DE WAELE, *Arch. Anz.*, 1931, pt. 1/2, cols. 102-105, 2 figs.)

### CYPRUS

**Vounous.**—M. DIKAIOS, director of excavations in the prehistoric necropolis at Vounous, presents a condensed report of his more recent finds. Much pottery of a very unique type and believed to belong to the Early Bronze Age, 3000 to 2100 B.C., are the chief fruits of these investigations. The richness of the material uncovered makes the collection one of the most significant finds ever unearthed in this island. Apparently evidences of snake-worship are to be seen in some of this pottery, and we are thus reminded of similar Minoan practices. (*The Ill. Lond. News*, Oct. 31, 1931, pp. 678-679 (10 figs.) and Dec. 5, 1931, pp. 891-893, 7 figs.)

### AEGEAN ISLES

**Rhodes.**—In *The Ill. Lond. News*, July 18, 1931, p. 121 (4 figs.), GIULIO JACOPI reports on rather remarkable and significant discoveries recently made in the necropolis of Camirus on the island of Rhodes, where about four hundred graves that had remained intact have been opened, with the result that a considerable variety of elegant pottery and also a stele of Crito and Timaritsa believed to show Pheidian influence were brought to light. The objects are assigned to the period from the seventh to the fifth century B.C.

### ITALY

**A New Head of Mars Ultor.**—In *Jh. Oest. Arch. I.*, xxvi, 2 (1930), pp. 136-143, L. POLLAK identifies the lychnites head in the Cleveland Museum of Art, by comparison with the Mars statue in the Capitoline and the bust of Mars in the Villa Ludovisi. The children held in the hand of the Cleveland Mars he identifies as Romulus and Remus.

**Agrigentum.**—Recent Excavations.—In *R. Arch.* xxxiii (1931), pp. 258-274 (5 figs.), R. JOURNET deals with the excavations conducted by M. Marconi at Agrigentum in 1928-30. A sanctuary of Demeter and Kore with two grottoes and a vestibule has been investigated and is dated by Marconi as early as the eighth century B.C., though the earliest pottery and votive statuettes go back to the beginning of the sixth century. A second sanctuary to the same divinities has been partially excavated, revealing two large altars,

a group of six small altars, a megaron, and a small bothros. The temple is not yet uncovered. These remains date perhaps from the beginning of the sixth century. Further excavation shows that the temples of the Dioscuri, of Hephaestus, and of Asclepius were constructed in the second half of the fifth century B.C.

**Chiusi.**—In *The Ill. Lond. News*, Aug. 22, 1931, pp. 293-295 (13 figs.), DORO LEVI writes about recent explorations of Etruscan tombs at this site. A new tomb has been discovered. Unfortunately all metal objects had been removed, but the sarcophagi and other objects in stone still remaining are of great importance. The cover of a cinerary urn of a certain Larth Sentinate Caesa is very elegant and shows the influence of the best Greek sculptural tradition upon Etruscan work. Portrait statuary is here executed with marked realism. Warrior scenes are also depicted. The tombs are assigned to the period between the middle of the third and the middle of the second century B.C.

**Herculaneum.**—The main results of the more recent work at Herculaneum under the direction of Professor MAIURI are illustrated by means of photographs reproduced in *The Ill. Lond. News*, Dec. 12, 1931, pp. 942-943 (9 figs.), showing a reconstructed villa, parts of the city wall, portions of the public baths for women including a beautiful mosaic in the women's dressing room of the bath, an elegant group of sculpture in the form of a deer attacked by hounds, and other considerable parts of buildings and streets. *Ibid.* in Dec. 19, 1931, p. 1010, a photograph of a stretch of street shows such important features as doorways of houses, pillars, walls, etc., in an unusually good state of preservation.

**Isola Sacra.**—Professor GUIDO CALZA has assembled some of the sculptural material recently discovered at Isola Sacra that serves to illustrate the arts and crafts pursued by the persons who were buried in the necropolis at this site. (*The Ill. Lond. News*, Sept. 12, 1931, pp. 394-395, 9 figs.)

**Lake Nemi.**—In *The Ill. Lond. News*, July 25, 1931, p. 160 (2 figs.), is shown the work of excavation on the second of the galleys of Caligula.

**Minturno.**—Through the good offices of Count David Costantini, the University Museum, Philadelphia, has been excavating in Italy, a privilege that has not been accorded to non-Italian institutions for many years. Under the

supervision of Dr. Amedeo Maiuri and with Jotham Johnson as field director, the expedition, which is still in the field, has discovered both Roman and pre-Roman remains. Of the latter, the walls of probably the earliest acropolis have been revealed, together with the massive construction of a later period. A temple podium has been found and also fragments of what are probably the pediment sculptures of the temple, wrought in painted terra cotta. From the Roman period are some excellent sculptures, numerous inscriptions, architectural details, and small objects. A late basilica has been revealed on the edge of the Forum; here was found an excellent portrait head of the fourth century A.D. Among a number of inscribed statue bases were two with inscriptions referring to Galerius Valerius Maximianus and Flavius Valerius Severus, fourth century emperors. A tremendous sewer that seems to antedate the Roman period, and a fountain facing upon the Appian way are among other important public works that have been disclosed. (*University Museum Bulletin*, November and December, 1931.)

**Rome.—Disiecta Membra of Greek Vases.**—An inspection of the newly-opened Castellani collection of vase fragments in the Villa Giulia Museum at Rome, in 1929, led J. D. BEAZLEY to compare this with the similar Campana collection in the Archaeological Museum at Florence, and disclosed the fact that, during the time when the Campana collection was in the custody of the Monte di Pietà in Rome, Alessandro Castellani had access to it and evidently transferred pieces from it to his own collection and disposed of others abroad, with the result that the parts of a single vase may now be in two or more different cities. As a step toward partial restoration it was arranged to transfer temporarily all the red-figured fragments from Florence to Rome and all the black-figured from Rome to Florence. Meanwhile Mr. Beazley publishes a list of some sixty-odd vases whose sundered parts he identifies with reasonable certainty in many museums outside of Italy, as well as in the two main Italian collections and those in Palermo, Syracuse, and Naples. Heidelberg possesses the largest number of exiled fragments, but others are in Tübingen, Berlin, Bonn, Dresden, Leipzig, Munich, Vienna, Athens, Paris, London, Oxford, Cambridge, Aberdeen, New York, Chicago, Baltimore, Bryn Mawr, and a few other places. Many of the vases are inscribed or are otherwise identified as the work of

well-known painters or schools. *J.H.S.*, li (1931), pt. I, pp. 39–56; 8 figs.

#### FRANCE

**Vichy.—An Enamel Wheel Amulet (Rouelle-amulette).**—In *R. Arch.*, xxxiii (1931), pp. 107–110 (4 figs.). A. MORLET describes an octagonal wheel amulet ornament with polychrome enamel which he assigns to the first century B.C.

#### AUSTRIA

**New Material in Museums.**—In *Jh. Oest. Arch. I.*, xxvi, 2 (1930), pp. 200–215 (figs.), E. POLASCHEK reports on new accessions to the museums in Neustadt and Neunkirchen-am-Steinfelde. They are principally Roman inscriptions.

#### RUMANIA

**Neolithic Inscriptions.**—In *R. Arch.*, xxxiii (1931), pp. 14–28 (7 figs.), O. TAIFRALI describes recent finds in Rumania at Coșești, Bunești, and Rădășani of objects apparently of the Neolithic period which bear inscriptions with letters like those found at Alvao and Glozel. They indicate the authenticity of the inscriptions of Glozel and the existence of a genuine system of writing in Neolithic times.

**Banyabukk.**—In *Archaeologiai Értesítő*, xlv (1930), pp. 228–229, ANDREAS OROSZ describes a find of copper weighing about 30 kg., the largest ever yet found in Siebenbürgen. The objects are so perfect that they seem to have been unused; the deposit was probably that of a forge.

**Érmihályfalva.**—In *Archaeologiai Értesítő*, xlv (1930), pp. 229–232, MARTIN ROSKA writes about a German grave from the first century A.D. The grave seems to have formed part of a cemetery, which should be examined. There are few other monuments of this period.

#### BULGARIA

**Duvanlii.—Tombs.**—In two of the smaller tumuli near Duvanlii, in Southern Bulgaria, which are being excavated by the Bulgarian Archaeological Institute (Boschova-mogila and Muschkovitza-mogila by name), there have been found, beside later scattered burials, two richly furnished, undisturbed graves, of the sixth or fifth century B.C., one containing the bones and ashes of the dead in a silver bowl, the other the skeleton of a woman. The offerings resemble those found in tumuli in Southern Russia and elsewhere in



Balkan countries, and include gold jewelry of Hallstatt types, gold breast ornaments, fine silver and bronze vessels, a Greek bronze cuirass, bronze arrow-points, a mirror and fibulae, an oenochoe of colored glass from Egypt, a terra cotta statuette of a woman, a small alabaster flask, and pottery of various origins, including a very interesting Athenian red-figured hydria with the seldom seen subject of a theoxenia of the Dioscuri on the shoulder and an indoor parting scene on the front, and another less elaborate red-figured hydria with a similar subject. (B. FILOW, I. WELKOW, *Jb. Arch. I.*, xlv (1930), pt. 3/4, pp. 281-322; 4 pls.; 44 figs.)

#### JUGOSLAVIA

**Doupljaya.**—At this village, to the north of Belgrade, was recently discovered a unique three-wheeled votive chariot with a bird-headed deity. Dr. J. PETROVITCH, of the National Museum of Belgrade, would assign the object to the end of the Bronze Age. (*The Ill. Lond. News*, Aug. 15, 1931, p. 265, fig.)

**Klicevac.**—At this place, in Eastern Serbia, a Bronze Age idol has been discovered, which is reported by Dr. J. PETROVITCH in *The Ill. Lond. News*, Aug. 15, 1931, p. 265 (fig.).

**Starcevo and Lipovac.**—V. J. FEWKES has been excavating under the auspices of the Peabody Museum of Harvard University and the University Museum, Philadelphia, at these two sites. Early painted ceramics were obtained at the former, and an advanced phase at the latter. Starcevo is important for dating by reason of the similarity of the material to that found at Vinca. Ceramics and artifacts found promise to throw new light on the culture of Central Europe. (*University Museum Bulletin*, December, 1931.)

**Trebenishte.**—A New Grave.—In the summer of 1930 an eighth grave was opened at Trebenishte, and its contents (objects of gold, silver, bronze, iron, glass, terra cotta, and amber) are described and illustrated by N. Vulich in *Arch. Anz.* 1930, pt. 3/4 (cols. 276-299; 22 figs.). They include a gold, life-size mask, a pair of gold sandals and a gold glove stamped with gorgons and sphinxes, an embossed plaque, some garment pins, a drinking horn and a cylindrical beaker, all of silver trimmed with gold, a bronze helmet with appliqués of gold, a large bronze volute crater having medusa heads on the handles and naked riders, galloping around the neck, with its tripod,

ornamented with medusas, snakes, and palmettes, another tripod and amphora of bronze, an oil-flask of colored glass, an iron sword and sheath. These eight richly furnished graves of warriors, contemporary and to be dated in the end of the sixth century B.C., may belong to a local dynasty, whether Greek, Illyrian, or Macedonian in origin, or to a group of Greek generals, but in either case, the men apparently all fell in the same battle.

#### CZECHOSLOVAKIA

**Homolka.**—V. J. FEWKES reports on his recent excavations for the Peabody Museum of Harvard University and the University Museum, Philadelphia. Excavations of the Neolithic fortress of Homolka were completed. Three periods of occupation were noted. The first, dating about 2000 B.C., was distinguished by simple subterranean dwellings and the complete absence of fortification. Period II marked the development into a strong socio-economic unit from a prosperous agricultural tribe whose hilltop seat was fortified by a palisade. The huts were of larger proportions, well defined by posts and sub-pits. In Period III the occupants attained their highest level of culture. The houses, cut into the side of the hill, were spacious and well-constructed. A palisade was built under the hill proper and the stronghold apparently was never taken. The site suggests a sudden abandonment followed by natural decay of the stronghold.

#### HUNGARY

**Pákozdvár.**—In *Archaeologiai Értesítő*, xlv (1930), pp. 53-73, ARNOLD MAROSI describes the settlement at Pákozdvár in the county of Fejér, and shows the chief finds made there: the discovery of the wall with the upper part strengthened with stone, discovery of underground hive-shaped house, and 1228 objects found chiefly in the ash pits.

**Pápa.**—Grave Finds from the Time of the Avars.—In *Archaeologiai Értesítő*, xlv (1930), pp. 124-141, LADISLAUS V. JANKÓ reports on the contents of three graves found near Pápa. The graves, which apparently belong to the second half of the seventh century A.D., are important for the relationships indicated, since they contain materials that point to Persian, Scythian, and Byzantine influence. No animal bones were discovered in these graves or other remains indicating means for maintaining a livelihood.



## RUSSIA

**Leningrad.—Some Antique Vases in the Hermitage Museum.**—Eight vases recently transferred from the Museum of Industrial Art to the Hermitage are described and illustrated by S. KORSUNSKA in *Arch. Anz.* 1930, pt. 1/2 (cols. 15-36; 13 figs.). (1) Minoan pot encircled by a water plant in dull red. (2) Etruscan cup with shallow, fluted bowl and single high handle and rectilinear patterns in dull white on rim and shoulder. (3) and (4) Two Corinthian vases, one with narrow neck and cover, the other (pyxis) with wide mouth and female busts for handles, both painted in the usual animal and pattern friezes. (5) Late black-figure hydria with Heracles and the Cretan bull on the shoulder and a band of palmettes around the body, both on ground reserved in the black glaze which covers the rest of the vase. The painting resembles that of Scythes but is less careful, and suggests a date about 500 B.C. (6) Unsigned red-figure amphora by Duris. A, nude youth and  $\text{HO ITAI} \varsigma \text{ KAI} \text{ O} \varsigma$ ; B, flying Niké with  $\text{KAI} \text{ O} \varsigma$  and  $\text{NIKE}$ . (7) Red-figure Nolan amphora: A, Dionysus in combat with giants and  $\text{KAI} \text{ O} \varsigma + \varsigma \text{AN} \text{ O} \varsigma$ ; B, beardless youth in mantle. (8) Low bowl of terra sigillata.

## SPAIN

**Gerona.—The Roman Walls.**—In examining all the accessible parts of the existing city walls of Gerona (anc. Gerunda) in the N. E. corner of Spain, A. FICK has found substantial portions both of the cyclopean walls of the Iberian city, which was in existence when Cn. Scipio entered Spain in 218 B.C., at the beginning of the Second Punic War, and of the Roman walls, which belong chiefly to a reconstruction of the third century A.D. So far as can be ascertained at present, the line of the defences has not changed substantially, the Romans having used the Iberian structure as a foundation for their own, but they used a comparatively soft sandstone from a neighboring quarry, while the original walls were of a hard volcanic rock. Two city gates, flanked by semi-circular towers, near the N. W. and S. W. corners of the circuit, and several other square or round towers or bastions are still in evidence. (*Arch. Anz.* 1930, pt. 3/4, cols. 266-275; 6 figs.)

**Old Cáceres.—Castrá Caecilia II.**—In the second campaign of exploration of the Roman camp at Old Cáceres in September and October,

1928 (see *A. J. A.* 1929, pt. 3, p. 421) the features found and wholly or partly excavated were the *porta praetoria* and part of the *fossa* on the north; the *praetorium*, of unusually large dimensions and peculiar plan, and with a sort of propylaeum entrance; the *via principalis*; one of the tribunes' houses and another small house of the court-yard type; the east side of the forum, with many remains of the contents of the booths, which were abandoned by their owners and burned by the enemy without plundering; the *quaestorium*, at the southern end of the enclosure next the *porta decumana*, partly destroyed by the building of a modern highway; and some barracks to the west of the *quaestorium*. The coins found, both Iberian and Roman, are consistent with the date of 79 B.C. for the building of the camp. Other objects, found only in the southern half of the area, include both native and Italian pottery, vessels for storage or table and kitchen use, lamps, spindle whorls, and small beads, bronze pins, needles, fibulae, and surgical instruments, iron weapons and utensils, a granite hand-mill, a *tessera hospitalis* in the form of a dolphin marked H [ospitium] F [ecit] QVOM (=cum) ELANDORIAN, a formula in which the subject of *fecit* is the name of the person on the other half of the tessera, here a Roman. Elandorian is perhaps a tribal name derived from the known Iberian name Elandus. (A. SCHULTEN, R. PAULSEN, *Arch. Anz.* 1930, pt. 1/2, cols. 37-87; 7 plans, 14 figs.)

## GREAT BRITAIN

**Chester.**—In *Ann. Arch. Anth.* xviii, 1/3 (March 1931), pp. 6-18 (6 pls.), J. P. DROOP and R. NEWSTEAD write about the excavations in the Deanery Field, Chester, in 1928, where considerable work was done in uncovering the walls of the buildings and in revealing the plans.

**Colchester.**—In *Ant. J.* xi, 3 (July 1931), pp. 273-277 (3 pls.), CHRISTOPHER HAWKES reports on the latest work carried out on the site of the Celtic Camulodunum. The evidence, coins and pottery, derived from the excavations has particular bearing on the reign of Cunobelin, third ruler of the Belgic dynasty. Very notable are the relationships observable between the pottery of this site and certain wares from Belgic Gaul and the Rhine country. There is strong evidence that this region drew heavily at this period upon the cultural life of the Roman world. Especially important is a moulded glass cup of a type designated the "chariot-race" cup in the

British Museum, and showing four pairs of gladiators.

In *The Ill. Lond. News*, Aug. 15, 1931, p. 265 (fig.), is shown an interesting enamelled Roman brooch very realistically executed in the shape of a dolphin and of unusual size for this type of pin.

**Eynsham.**—In *Ant. J.* xi, 3 (July 1931), pp. 280–281 (2 figs.), E. T. LEEDS announces the discovery of a handled beaker at Eynsham, Oxfordshire. The general type of this vessel is rare in the British Isles. It measures about 6 inches in height, and its diameter is  $3\frac{1}{4}$ ,  $4\frac{3}{4}$ , and  $4\frac{1}{2}$  inches respectively at the base, at the belly, and across the mouth.

**Kirmington.**—**Palaeolithic Implements.**—In *Ant. J.* xi, 3 (July 1931), pp. 262–272 (9 figs.), J. P. T. BURCHELL writes about Palaeolithic objects found about Kirmington, in Lincolnshire.

**Lincolnshire.**—In *The Ill. Lond. News*, Aug. 15, 1931, p. 265 (fig.), is shown a previously undescribed Romano-British burial monument in the form of a limestone carving showing the figures of Pluto and Proserpine. The slab is  $10\frac{1}{2}$  in. high and 7 in. wide.

**Perthshire.**—GORDON CHILDE writes (*Ant. J.* xi, 3 (July 1931), pp. 281–282 (fig.)) about the discovery of a brooch apparently of the La Tène I period, in a fort near Abernethy, Perthshire. The object suggests, when considered in connection with certain other facts known about Scottish forts, contact with Gaul across the North Sea.

**Scunthorpe.**—In *Ant. J.* xi, 3 (July 1931), pp. 279–280 (fig.), A. LESLIE ARMSTRONG reports the discovery of a flat bronze celt at Risby Warren, Scunthorpe, N. Lincolnshire, which apparently was imported from Ireland.

**Stanwix and Thatcham.**—In *Ant. J.* xi, 1 (January 1931), pp. 37–45 (9 figs.), R. G. COLINGWOOD writes about Roman objects recently discovered at Stanwix, a suburb of Carlisle, which is on the spot of an old Roman town following a fort, and at Thatcham, where closely in line with a modern road runs the course of a Roman road between Silchester and Speen.

The collection of objects from Stanwix includes: 9 coins from Domitian, Nerva, Trajan, and Hadrian; about 80 small objects, most of which are of bronze and were used in connection with personal garments and armor or the harness of horses; pottery; and leather. The military character of the collection is notable. It appears as

if the group of objects had belonged to a bronze-smith's workshop. The second quarter of the second century is given as the very probable date of the find. No buildings with which these objects were associated remain.

The pieces from Thatcham were found at the bottom of a well and include: a flagon, two shallow bowls, a deep bowl, an oval dish, and a platter; also pieces of leather and a coin of Constans. The vessels are of pewter and illustrate recognized fourth-century types.

**Verulamium.**—A beautiful Roman mosaic floor with the head of a goddess in the centre has been discovered by R. E. MORTIMER WHEELER and is shown in *The Ill. Lond. News*, Nov. 21, 1931, p. 820 (2 figs.).

#### NORTHERN AFRICA

**Tipasa.**—**New Investigations.**—In *Mél. Arch. Hist.* xlvii (1930), 182–201 (6 figs.) JACQUES HEURGON, who conducted some excavations at Tipasa in the spring of 1929, writes about some tombs, which apparently date from the time of Claudius. He has discovered that the basilica was built after the monumental stairway and the forum, and that the basilica seems to have been later converted into a Christian church. The study of a mosaic, bearing a vintage scene and a metrical inscription, leads Heurgon to believe that the owner of the house in which it is found built or adapted a room in his house as a private chapel.

**Volubilis.**—In *C. R. Acad. Insc.*, July–Sept. 1929, pp. 189–190, is reported the discovery of a bronze Bacchus, 0.85 metre in height. The statue is nude, standing, crowned with ivy, the right foot in the rear, the right arm held erect with the hand slightly bent back, the left arm forward as though the young god held in his right hand a bunch of grapes and in the left a cup. The head is rather effeminate. This is one of the finest statues that have been found in this region.

#### EARLY CHRISTIAN, BYZANTINE AND MEDIAEVAL

##### EGYPT

**Monastic Art of the Twelfth to the Fifteenth Century.**—In *The Ill. Lond. News*, July 4, 1931, pp. 14–15 (10 figs.) are shown some hitherto unknown types of Byzantine painting recently subjected to careful examination by the Byzantine Institute of America.

## SYRIA AND PALESTINE

**Jerash.**—In *Pal. Ez. Fund*, July 1931, J. W. CROWFOOT reports on the recent work carried out about the Fountain Court at this site. The work on the early Christian remains has been concluded. It seems that more of the pre-Christian history of this city will be revealed. Three inscriptions to an Arabian god have been discovered. Near the temple of Artemis is the nymphaeum, which besides being a public fountain was also a shrine to the nymphs who suckled Dionysus, with whom the Arabian god was very commonly identified.

## TURKEY

**Constantinople.**—Acquisitions of the Museum since 1914.—No official catalogue of additions to the collection of antiquities in Constantinople has been published since 1913, but many objects have been acquired since that time. A selection of fifty-five of the most important pieces of sculpture in stone and marble, including sarcophagi, statues, reliefs, pillars and other architectural fragments, some of them Roman but more of the Byzantine period, are described and in part illustrated, by A. MÜFIT, in *Arch. Anz.* 1931, pt. 1/2, cols. 173-210, 28 figs.

In *The Ill. Lond. News*, June 27, 1931, p. 1107 (1 fig.) is shown in actual colors the icon of St. Eudokia recently reported to have been discovered by STANLEY CASSON in the Church of St. Mary Panachrantos (*A.J.A.* xxxv, 3 (1931), p. 338).

## GREAT BRITAIN

**Essex.**—W. POLLITT writes (*Ant. J.* xi, 3 (July 1931) pp. 284-285, pl.) about the acquisition of a collection of Anglo-Saxon objects by the Southend-on-Sea Museum in Essex, which includes saucer brooches, an iron sword, spears, and beads.

**Luton.**—T. W. BAGSHAW reports (*Ant. J.* xi, 3 (July 1931), pp. 282-284, fig.) the chance discovery of a Saxon burial at Luton, in Bedfordshire. Fragments of iron shears and of cowie shells were found among the skeletal remains.

**Lydney.**—In *Ant. J.* xi, 3 (July 1931), pp. 240-261 (7 pls.; 9 figs.), D. A. CASEY reports the results of excavations in 1929 on Little Camp Hill adjoining the larger Camp Hill at Lydney, in Gloucestershire, where the remains of a castle have been thoroughly uncovered. Practically all the objects found belong apparently to the castle; the

few coins and pieces of pottery from Roman times probably should be associated with the recognized Roman ruins on Camp Hill. From these excavations the plan of the castle has been worked out fairly completely and also many details of the wall structure. Exact dating is, in the absence of documentary evidence, not possible, though it is clear that the Lydney castle is of the Norman keep-and-bailey type, a species that continued to the end of the twelfth century. The time of Stephen is suggested as the most probable period. Among the iron objects found are: shears, buckles, a pick, keys and parts of locks, and nails. The pottery, which has more importance than the metal work, consists largely of unglazed cooking vessels.

**Petworth.**—A Greek Inscription.—An inscribed slab of dark grey tufa, which was discovered in 1930 on the grounds of Petworth Castle, is published by W. H. BUCKLER in *J. H. S.* li (1931), pt. 1, pp. 106-118 (3 figs.). It is the second half of a Greek funeral inscription, on a raised tabula ansata, and undoubtedly is the right-hand half of the long side of a sarcophagus, the first half of the inscription being on a similar raised tablet on the missing left-hand half. The surviving portion says that [the tomb is erected] "also for the husband, Aurelius Aspidas, and the children" of a lady named Aurelia, and concludes with an imprecation against unlawful use of the tomb, in an intentionally obscure Christian formula. The place of origin is not known, possibly Asia Minor. The date, apparently the third century, makes this one of the earliest Christian documents in existence in England.

**Winchester.**—Anglo-Saxon Bowl.—In *Ant. J.* xi, 1 January 1931, pp. 1-13, 4 figs., W. J. ANDREW and REGINALD A. SMITH report on an excavation near Winchester in 1930, where they found a grave containing the skeleton of a man upon whose breast stood an interesting type of bowl of hammered bronze with rich enamel decoration, the purpose of which has long been a vexing question. The excavators of this bowl note striking references to such a vessel in *Beowulf*. These bowls, which, by the way, are associated largely with the British Isles, may have been used in ceremonies as receptacles for holy water and thus would very naturally have been placed on the person's corpse after death for prophylactic ends. A date prior to 550 is suggested. A scaramasax, or hunting- or sword-knife and a spear-head were also present in the grave.

## RENAISSANCE

### GERMANY

Klinck (Mecklenburg).—Portrait by Bernardo Strozzi.—In *Z. Bild. K.* lxiv (1931), pp. 233-236 (3 figs.), W. KÖRTE announces a hitherto unknown portrait by Bernardo Strozzi in the Schnitzler collection at Klinck. It is a masterly portrait of an obviously distinguished man, and has the historical advantage of bearing the artist's signature. The style of the work in the manner of Van Dyck dates it around 1630.

## FAR EASTERN

### PERSIA

Damghan.—ERICH SCHMIDT, field director of the joint expedition of the University Museum, Philadelphia, and the Pennsylvania Museum of Art, reports the finding of over forty Bronze Age burials at Tepe Hissar. All were well equipped with weapons, household goods, and ornaments of a most interesting character. One of the more important burials was apparently that of an illustrious warrior. It contained, among many objects, a unique bronze bident and a striking silver ewer. The culture represented in these burials most closely resembles the Sumerian, but no definite relationships have yet been established. A Sassanian palace of about A.D. 300 has also been discovered, but no details have yet been published about this latest find. *University Museum Bulletin*, November, 1931. The work at Damghan is still in progress and will be reported more fully later.

### INDIA

Mohenjo-Daro.—In *The Ill. Lond. News*, Dec. 19, 1931, pp. 1000-1004 (24 figs.), Sir ARTHUR KEITH writes about the significance of the results achieved through the excavations at Mohenjo-Daro during the past seven or eight years, many of which have been previously noted in these News reports. Especially the light revealed from the discoveries in sculpture, architecture, and from remains from burials has been noted.

### CHINA

Anyang.—At this site, in the province of Honan, from which archaeological investigations were reported about two years ago, new and significant results have been reached during the

past summer (*The Ill. Lond. News*, Aug. 8, 1931, pp. 222-223, 236 (13 figs.)) by the Chinese National Research Institute of History and Philology in cooperation with the Smithsonian Institution. Although political disturbances have interrupted the search, nevertheless much material bearing upon the Shang dynasty (1766-1122 B.C.) has been assembled. The objects are chiefly in bronze, axe-heads, spear-heads, and halberds. Their workmanship is very good; no earlier and more primitive objects, out of which this better work might have grown, have been found, and thus the story of Chinese bronze remains a puzzle. Nests of animal bones, among them the jaw-bone of a whale, suggest ancient centres of the bone-work industry. Evidence was also procured strengthening the chain of testimony on contact between the inhabitants of Honan and those of Inner Mongolia and Chinese Turkestan, believed to be the remote ancestors of the Huns and the Turks. Pits once used for human habitation furnish some light on the evolution of dwellings here, a subject which is to be studied further.

Excavations have been conducted also at Ch'eng Tzu Ai, near Tsinanfu, the capital of Shantung. Here a large quantity of pottery, ivory, bone-work, shell-work, copper weapons, and oracle bones was found. In a Late Neolithic layer were found fragments of surprisingly thin black pottery, only about half a millimetre in thickness. The discovery of this ware convinces the excavator of the existence of at least two distinct types of pottery culture in China.

Another site recently explored is at Wa Chia Hsieh, in the southwestern corner of Shansi province. At this spot remains from a culture probably covering the period 2000 to 1500 B.C. were found.

### MEXICO

Calixtlahuaca.—In *The Ill. Lond. News*, Aug. 29, 1931, pp. 330-331 (9 figs.), THOMAS GANN reports on the work of excavation recently conducted by the Mexican Government at Calixtlahuaca, near Toluca, and also at Teotihuacan, the ancient capital of the Toltecs. Certain mounds have been ascertained to have been heaped up over huge stone buildings. The large circular structures seem to have been the sub-structural supports of temples; one apparently was used to support the tower of an observatory. A drum-shaped stone, 72 cm. in diameter and 38 cm. in height, whose outer surface bears a figure,



repeated eight times, apparently again reflects the sacred number four characteristic of Calixtlahuaca. Quantities of pottery of considerable merit, together with other objects, were found. The exploration of the Toltec capital is revealing much evidence of the nature of the temple structures.

## CENTRAL AMERICA

### GUATEMALA

**Piedras Negras.**—THE ELDRIDGE R. JOHNSON EXPEDITION OF THE UNIVERSITY MUSEUM, PHILADELPHIA. Generally acknowledged as probably the finest known specimen of Maya art in stone is a limestone lintel found by the expedition under the direction of J. ALDEN MASON. This sculpture is the first known Maya example of any considerable relief carving. A central scene in high relief probably depicts an aboriginal ceremony. It is framed in margins of hieroglyphs, one hundred and fifty-eight in all; the latest of the six dates that have been deciphered is December 2, 737 A.D. (Goodman-Thompson chronology).

Six major excavations were made. In the West Group, work centered around two terraces containing eleven stelae, a stairway and pyramid behind one terrace, and the Acropolis. The northern and southern ball courts were partially excavated; the latter had sides in the form of sloping ramps instead of vertical walls, and three discoidal "bases" were found. The only standing building was almost entirely excavated and was found to contain four large rooms. In the face of contrary evidence it is unlikely that their great width of 3.80 metres was bridged by a corbelled arch; the conclusion is unavoidable that the rooms were roofed with horizontal timbers, a very rare or unknown construction in the Old Maya region, though known in the New. The face of pyramid 27 was examined and the crowning temple partially excavated. On this temple in particular and in lesser degree on the other temples, fragments of ornamental stucco indicated former elaborate decorations of this material. Ceremonial caches were found buried under the stelae, under the altars, and under the floors of the temples; these consisted of flint and obsidian objects, chipped in peculiar shapes, and of ornaments of jade and shell. In the southeastern portion of the city, beyond the limits of the major ceremonial structures, excavations were made in mounds thought to be domiciliary in character. These revealed three superimposed periods of

construction. The University Museum will resume excavations at Piedras Negras in January, 1932. A detailed report will be published shortly in *Mus. J.*

## SOUTH AMERICA

### BRAZIL

**Matto Grosso.**—VINCENT M. PETRULLO, the representative of the University Museum, Philadelphia, on the recent Matto Grosso Expedition, reports on excavations and on reconnaissance by airplane. Excavations were conducted at Descalvados, on the banks of the Paraguay River. Although the sites are under water for several months of the year, rare and interesting pottery objects were found as well as two different types of burial. One section of particular interest revealed a number of skeletons grouped about one of the many large pottery jars found in this cemetery. Survey flights were made over a large area watered by the Xingu, Kuluseu, and Kuluene Rivers, and a visit was paid in the Kuluene-Kuluseu region to some of the native tribes whose living conditions are most primitive.

## UNITED STATES

**New Mexico.**—MR. EDGAR B. HOWARD, of the University Museum, Philadelphia, continued last summer his work in the Guadalupe Mountains. In a cave on the eastern slope he found a quantity of animal bones, mostly of Pleistocene age and some of them in definite association with hearths found at various levels below Basket-Maker burials. Among the bones found were musk-ox, bison, antelope, horse, camel, and California condor. One of the three Basket-Maker burials that were uncovered contained charred human bones in a very fine twined-woven bag, which was wrapped in antelope skin. Approximately four feet below this burial was a hearth in which were several bison bones and a spear point similar to those of the Folsom type. The finding of horse bones in this cave brings up the question of when the horse actually died out in this country prior to its reintroduction by the Spaniards. *University Museum Bulletin*, November, 1931.

### ALASKA

**Cook Inlet.**—The researches of Miss FredERICA de Laguna of the University Museum, Philadelphia, assisted by Wallace de Laguna and Edwin B. Newman, centered in Katchemak Bay,



on the southern coast of Cook Inlet, where several shell-heaps and village sites were excavated. Some of these appear to be of considerable age, since deposits were found to a depth of fourteen feet, and the oldest site is now entirely below the level of high tide. The excavations indicated that the culture of the ancient population was Eskimo, although the region is now inhabited by the Kenai Indians, an Athabaskan group. Stratigraphical results indicated four stages of Eskimo culture, which apparently was most similar to the cultures of the present Eskimo of

Kodiak Island, Prince William Sound and the southern coast of Kenai Peninsula. Probably the most interesting object found was a well-shaped stone lamp with V-shaped grooves on the bottom, apparently belonging to the culture which produced the remarkable stone lamps with figures in the bowl. Among the specimens of ancient Eskimo types were many grooved or notched stones, presumably for use as bolas. Several burials were found; these have not yet been studied. (*University Museum Bulletin*, December, 1931.)

### NEWS ITEMS FROM ATHENS

An open meeting was held at the German Archaeological Institute on December 9, 1931, to celebrate Winckelmann's Day. The Director, Mr. Karo, spoke of the work of three German scholars who had died during the past year, Gerhard Krahmer, Ferdinand Noack and Ulrich von Wilamowitz-Moellendorf. The second half of the meeting was taken up by Mr. Kourouniotis, Director of the Department of Antiquities, who gave a report on his excavations at Eleusis during the summer of 1931.<sup>1</sup> On December 10, Mr. Marinatos, Ephor for Crete and Director of the Candia Museum, published an article in the Athenian newspapers on his very important discovery during the month of November, when for the first time traces of Minoan civilization were found in the western part of Crete, near Amari in the district of Rethymno. Last year when the peasants were building a road they found two bronze double axes, one of which bore the incised decoration of a bucranium. Mr. Marinatos believes that this axe was used for ritual purposes, perhaps in connection with the slaying of the bull. A third axe later came to light. These finds led Mr. Marinatos to carry out investigations in the neighborhood. His trial excavations produced important results, for the objects found within the short time available surpassed all expectations. The three axes were found at a place called Petras which lies on the slope of a little hill, and here, under a layer of stones, were many sherds of different periods. Some time ago a clay sarcophagus containing a skeleton had been found in this same neighborhood and also

<sup>1</sup> A summary of these excavations was given in the last installment of the News Items.

the lower half of a pithos. Mr. Marinatos thinks that a sparse settlement of woodcutters was built on this hillside in antiquity just as today there are woodcutters' huts near the edge of the forest. A dreadful earthquake appears to have wiped out this settlement about 1350-1300 B.C. and to have covered it with a layer of stones. On the summit of the hill were found remains of many houses one of which, when excavated, was discovered to belong to a much older epoch—that is, to the very beginning of the Early Minoan Period—the first instance of this early civilization found in western Crete. This house is typically Early Minoan, consisting of only one room, irregularly quadrilateral, three walls of which were built of small rough stones set in clay while for the fourth side the natural rock was used. Inside the house were found many sherds of polished black ware, the so-called Pyrgos style. The principal shape is the goblet. These pots rarely occur even in eastern Crete, having been found only in two caves and three tombs, and this is the first time they have been discovered in a settlement. Their date is about 3000 B.C. The exploration was also important in other respects, since a neolithic celt of green serpentine was found on the surface of the ground and a workman reported that a similar one had been picked up some time ago in a neighboring region. This second one is of the same material, while a third, of black diorite, was also brought in from the neighborhood. This latter is more regularly shaped and heavier. The finding of these neolithic tools on the surface of the ground indicates that further investigations should be carried out among the grotto-like formations under the over-

hanging ledges on the hillside. This region which lies at a height of more than 700 m. is covered even today by great forests of oak and there is no doubt that in ancient times the forests were denser and swarming with game and the inhabitants would have been hunters and woodcutters. On the last day of his visit Mr. Marinatos was shown a small cave, the entrance to which was so narrow that a man could scarcely get through the opening, but the cave widened out beyond and had many side branches. The interior of this cave was examined by the very inadequate light of an electric torch but there were so many potsherds on the floor that the excavator and his companions filled their hats with them. When these were examined in the daylight they proved to consist of: one small piece of a neolithic pot and a great quantity of Middle Minoan sherds which included the well developed, polychrome style of Kamares ware. These finds prove that all the periods of Minoan civilization are here represented and that we have here the same type of sacred cave and worship of a chthonic divinity as in eastern Crete.

In the summer of 1930 Mr. Marinatos carried out excavations in the northern part of the island of Cephalonia which were continued again in 1931. During the campaign of 1930, on the south coast of the peninsula Palis, near the harbor called Valtsa, he found remains of a wall and mosaics, one of which shows four dolphins grouped around a peculiar-shaped trident. It would appear that there had been a great sanctuary of Poseidon here in late Roman times, since it was the last stopping place for the ships before crossing the Ionian Sea. There is now a chapel of St. Nicholas on the same site, for this saint is also supposed to act as a protecting divinity for the sailors. The walled peribolos of another sanctuary occupies the hill Chalio at the end of the bay near the village of Kardakata. Architectural fragments were found here and pieces of terra cotta, female figurines dating from the archaic to the classical period. Further investigations near Alaphona in the Kranion plain, where Mr. Kyparissis had found two rock-cut tombs in 1911-12, led to the finding of empty bothroi in front of the tombs and, farther south, three rectangular houses with sherds of Late Mycenaean as well as local ware. Deeper in the plain is a necropolis with Early Helladic and Greek burials in gable-shaped tiled graves. Six of these were opened. On the south spur of the acropolis of Krane four layers of Greek sherds as

well as Geometric and probably Late Mycenaean examples were found. Near Lexourion there was cleared a collapsed chamber tomb with the usual Late Mycenaean finds of spindle whorls of steatite and terra cotta, beads of carnelian, glass and gold, bronze fragments and many potsherds.

In the northwestern part of Corfu on the peninsula near the "Ship of Odysseus," H. Bulle and F. and W. Ott found, in the summer of 1930, a large neolithic fishing village with black polished, incised ware similar to that from Leukas and also resembling the pottery from Molfetta and Matera in Apulia. Immediately above the neolithic was a classical Greek stratum. On the rocky tip at the entrance to Porto Timone they identified a sanctuary of Dionysos which produced sherds with incised inscriptions dating from the fifth to the first centuries B.C. To the east of the entrance of the bay was a strong circuit wall and castle of Hellenistic date — perhaps used by King Pyrrhus of Epirus in connection with his Italian campaign. On the very high rocky tongue of Aphiona was found an early Byzantine settlement with slab and tile graves belonging to the fourth century A.D., as indicated by its bronzes.

Mr. Heurtley's report on the excavations of the British School in Macedonia in the spring of 1931 is now available. A site in western Macedonia was chosen, some 20 km. south of the Greek-Yugoslav frontier, near Florina, at the village of Armenochori. The excavations revealed a deposit of an average depth of 2 m., containing two levels of occupation. "Both belong to the early Macedonian Bronze Age culture, which is known from previous excavations of the School in other parts of Macedonia, to have flourished from about 2500-2000 B.C., and to have been the counterpart of the Early Helladic culture farther south, both being probably of Anatolian origin and developing on roughly parallel lines." At Armenochori the two levels represent the two phases of this culture, the earlier of which had associated with it numerous elements of an indigenous neolithic culture which had preceded it; the later Bronze phase was a development of the earlier. "In the upper level were found some thirty complete vases, each with two high-swung ribbon-shaped handles, a form which was to have great vogue in the succeeding period in the South, and throughout the subsequent history of Greek pottery. Its discovery in such a quantity in this early context at Armenochori is thus of unusual interest." Besides these vases, a large

quantity of coarse cooking vessels were found, some bored stone celts, small stone saws, and other stone objects all typical of this culture, as well as a remarkable clay figurine. Except for the neolithic sherds, and one incised sherd, no obvious contacts with more northern cultures were observed. A settlement belonging to the same culture was identified about 20 km. north of Bitolj in Yugoslavia.

Early in the year 1931 G. Welter and P. Strack carried out a small trial excavation in Aegina on the hill of the Aphrodite Temple. Genuine Cretan L. M. pots were found as well as local imitations. Much more important, however, were the investigations made by Welter in 1930 in the necropolis of the classical period. The fifth century necropolis surrounds the ancient city of Aegina and the tombs, some thousands in all, are of two types: the rock-cut shaft graves, and a form characteristic of Aegina, with a square-cut vertical shaft 3-5 m. deep from the bottom of which open two chambers. This shape is similar to prehistoric tombs but since the finds consist of late Corinthian and red-figured pottery the tombs must date from the beginning of the sixth century down to the capture of Aegina. Within this necropolis are some ruined Hellenistic chamber tombs with stepped dromos, arches with key-stones, and stuccoed walls. The simple tombs have a red dado below a richly painted frieze of garlands of foliage and flowers. A closer dating is not possible for the tombs had already been plundered and reused in Roman times. One tomb cleared last year had escaped this fate. The painting of the chamber shows the "incrustation style" known from Delos, which imitates variegated stone: blue-white orthostates and above them ashlar blocks of colored marble or breccia with many-colored particles against a dark or light background, while separating these are narrow courses of white and yellow-grey-white, imitating marble or alabaster. The pit for the dead showed no offerings, but the pottery from the earlier burials had been collected in one corner of the chamber at the end of a pit. Above this is a painted inscription in the Hellenistic cursive style. From the Thracian names and the reckoning of the day of the month by the Macedonian-Pergamene calendar, the tomb may be dated between 210 and 133 B.C. when Aegina was a possession of Pergamon. The tomb may have been that of wealthy Thracian hostages or prisoners taken to Aegina during the war waged

by Attalus II against the Thracians. Another necropolis lies on the westernmost point of the island. This consists chiefly of simple graves, but under the lighthouse on the point there are foundations for the basis of a great grave mound 16 m. in diameter, belonging to the fifth century B.C. Welter believes this to be the cenotaph of the Aeginetans who fell at Salamis.

In the city of Athens, in addition to the excavations of the American School in the Agora, excavations were conducted on the site of the Pnyx during the past winter, under the auspices of the Greek Archaeological Service, in an effort to solve some of the many problems which were still left unanswered about the meeting place of the Athenian Assembly. Field work continued from December, 1930, through June, 1931, with a small force of workmen under the joint direction of Mr. Kourouniotis and H. A. Thompson, Fellow of the American School of Classical Studies.<sup>1</sup> Four radial trenches cut in the northern part of the semi-circular area bounded by the familiar scarp and the colossal retaining wall, and numerous shallower trenches opened in its southern part permitted the examination of the terrain and stratification. The northern face of the great retaining wall was exposed throughout its course and some further clearing was done on the upper, southern terrace. As a result it is now possible to trace three distinct periods in the history of the site. In the earliest period the seating floor sloped with the natural slope of the hillside so that the audience sat facing northeast and the speaker looked southwest. The greater part of the floor was formed by the roughly dressed rock surface on which the citizens sat (*cf.* Aristophanes, *Eq.* 754, 783; *Vesp.* 31-33, 42 f.). Its upper rim was cut away somewhat by later quarrying but the remaining part of the auditorium may still be distinguished opening like a segment of a vast shallow bowl in front of the surviving bema (of the Third Period). The front of the assembly place consisted of an earth terrace supported by a low retaining wall, straight in its middle part, bent upward, *i.e.*, southward, at either end. Its line has been traced in a series of rock-cut beddings, roughly parallel to the southern scarp, which extend across the hillside slightly below the mid-point between the great bema and the colossal retaining wall. Included in these beddings are the so-called inner rock-cut steps ex-

<sup>1</sup> I am indebted to Mr. H. A. Thompson for this report on the Pnyx.

posed by Curtius in 1862 and again by Clarke and Crow in 1882-83. The bema and wooden benches for the dignitaries must have stood near the edge of this terrace but all traces of them have disappeared since it gave way. The main entrance was probably on the open eastern side. Historical considerations suggest a date around 500 B.C. for the inauguration of this assembly place of the First Period. It continued in use throughout the fifth century and to it, therefore, must be assigned the opening scene in Aristophanes' *Acharnians*. Seated anywhere on its floor Dicaeopolis might have gazed out toward his farm, looked over to the Agora or watched the prytanes streaming down from the eastern side to take their places beside the bema at the front. "The collapse of the earliest terrace necessitated the reconstruction of the auditorium. A new retaining wall was built farther down the hillside. A part of this wall had been exposed by the Greek Archaeological Service in their excavations of 1911-12. Its entire course has now been fixed and shown to lie on a great parabolic curve opening toward the southwest and running approximately parallel to the colossal outermost retaining wall. The retaining wall of this Second Period formed the back line of the auditorium and was carried up high enough to support an earth filling sufficient to turn the slope of the seating floor against that of the hillside and down toward a speaker's platform set on the southern side of the area. This second platform probably lay slightly to the southwest of the surviving bema of the Third Period. Unfortunately no trace of it has come to light. Two stairways led up over the retaining wall from the north, the more eastern of which has survived in its lower part and was uncovered in 1911-12. The western, of which nothing now remains, was approached by means of the rock-hewn steps which lead up from the north and disappear under the colossal outer terrace wall. The potsherds from the earth filling of the Second Period allow this construction to be identified with that attributed by Plutarch (*Themistocles*, 19) to the Thirty Tyrants of 404-3 B.C. Plutarch says they turned toward the land the bema of the Pnyx which had been made to look towards the sea. With the growing popularity of the Theatre of Dionysos as the assembly place from the middle of the fourth century onwards, the Pnyx was forsaken and neglected and was probably already in ruins by the first century B.C. The Third Period represents a

reconstruction and enlargement on the lines of the Second. To the Third Period belong the colossal outer retaining wall, the southern scarp and the rock-hewn bema at its midpoint. There is evidence to indicate that the retaining wall was never more than one additional course above its present height, so that a great earth embankment, free-standing in part, was required to provide a seating floor sloping outward and upward from the bema at all points. The main entrance consisted of a single monumental stairway (ca. 13m. wide) carried up over the retaining wall from the north. Its beddings have been found cut in the topmost surviving course of the wall and in the bed-rock at its foot. A few blocks remain in position and part of the low earth ramp which led up to it has also survived. The clearing on the upper terrace proved that the three huge blocks which stand in line parallel to the western part of the southern scarp are all that remains of a retaining wall built during this period to support a magnificent terrace crowning the hilltop. A secondary entrance led down from this terrace to the familiar three steps hewn in the shoulder of the scarp. A rectangular bedding above and to the south of the bema served, probably, as the foundation of an exedra for the use of officials or distinguished visitors. The objects found in the earth filling and the similarity of construction between the great retaining wall, the peribolos wall of the Olympieion and the Library of Hadrian point to a date in the second quarter of the second century A.D. "It is tempting to attribute the reconstruction to the interest of the Emperor Hadrian and to see at work here the same motives and spirit which prompted the rebuilding of the Pompeion at the Dipylon and the completion of the Temple of Olympian Zeus." To the north of the retaining wall of the Third Period clear traces were found of two water channels which at widely different times had followed the same course, that is, from the vicinity of the Enneakrounos around the northeastern shoulder of the Pnyx Hill towards the Hill of the Nymphs. The earlier of these is probably a part of the Peisistratæan main from which the original Enneakrounos was fed by a short branch line. The later channel dates from the time when both the Enneakrounos and the Pnyx in its final form had ceased to be used.

In the vicinity of the Pnyx but not in these excavations a marble head of the helmeted Athena was discovered during building operations. The head is more than life size and is an excellent



Roman copy of the Athena Parthenos closely resembling the Varvakeion statuette but of better workmanship. This head is now on exhibition in the National Museum as is also the recently discovered archaic seated statue of a draped male figure. In other building operations in the square of the Municipal Theatre a piece of the wall of Conon, 8 m. long and 3 m. thick, was discovered. Two courses of the wall are preserved. In the same place there was found an epistyle of white marble with an inscription about a gymnasiarch. Under No. 8 Eumolpidae Street the upper part of a grave stele was found with a gable showing an acanthus-palmette between two goats heraldically opposed. This fragment was taken to the Theseum where recently found marbles are now placed. The collection there contains some very interesting grave stelae and sculptured marble lekythoi as well as several *kouroi*. Below

the Philopappos Hill, towards Sikelia, a very rich Mycenaean grave was discovered in the process of digging house foundations, but unfortunately it was immediately destroyed without being reported to the Ministry. Its contents therefore cannot be listed, as only one part of the finds were preserved: a number of very large flat rosettes similar to the little round gold discs from Mycenae, several gold beads from a necklace, two small pendants in the form of an axe, granulated ornaments from a dagger handle, a longish gem of red carnelian engraved with what appears to be a winged horse. All belong to the fifteenth and fourteenth century B.C. These finds are especially significant as they mark the first trace of the necropolis belonging to the Mycenaean city of Athens.

ELIZABETH PIERCE BLEGEN

ATHENS, GREECE

## PALESTINIAN AND SYRIAN ARCHAEOLOGY IN 1931

THE year just closed has been one of great activity in Palestinian and Syrian archaeology. Many expeditions, representing various institutions and nations, have been at work on widely scattered sites. The departments of antiquities in the governments of Palestine, Transjordan, and Syria have also been busy conserving and to some extent restoring the most important monuments of bygone ages.

### I. PALESTINE

A significant development which it is a pleasure to record is the inauguration of the *Quarterly of the Department of Antiquities in Palestine*. Two numbers have appeared thus far. A curator of the department's museum, Mr. J. H. Iliffe, has been appointed, and work is proceeding on the new building, which is very conveniently located for members of our school.

If one should come to Palestine to visit the ancient sites on which work has been done during 1931, and should land at Haifa or Jaffa, he would probably visit first the caves in the *Wady el-Mughârah* and the adjacent valleys on the southern side of Mount Carmel, where the British School of Archaeology and the American School of Prehistoric Research have been excavating for three years under the direction of Miss Dorothy Garrod, with results of the greatest importance

for the prehistory of Palestine. One of the members of Miss Garrod's staff last spring was Mr. T. D. McCown, the son of Dean C. C. McCown, at that time director of our school in Jerusalem. Late in May Mr. McCown discovered in the Mousterian level of the cave he was excavating a skull and lower jaw believed to be those of a Neanderthal child. In the other caves of this group skeletons were found during the year with beads made of bone and shell, also articles of carved bone and stone, including some sickle handles of bone carved at the top in the form of animals' heads (v. *Man*, 1931, article No. 159).

Close at hand geographically, but far removed in the historical period represented, is the crusaders' castle of *Âthlûl*. The work of the Department of Antiquities here is proving of great interest. Attention during the past year has been devoted particularly to a group of tombs, apparently of the Persian period, under the Crusaders' fort at the southeast corner of the enclosure.

After visiting these sites our archaeological tourist might return to Haifa and proceed along the northern side of Carmel toward the southeast, diverging from the main road just before it crosses "that ancient river, the river Kishon," and continuing along the new road to Megiddo. Here at any time from October to June, he would find work going on under the Oriental Institute of the



University of Chicago. This excavation is being conducted on such a scale that news of important discoveries cannot be expected very frequently. The complete recording of one level of occupation over the entire surface of the tell and the removal of everything found in it must precede the opening up of another level. Discoveries are being made, however, the most interesting during the past year being an enormous tunnel at the bottom of a large vertical shaft 120 feet deep, described and pictured in the new handbook of the Oriental Institute. The buildings of the Solomonic level are being very thoroughly studied also, and some Bronze Age tombs with important pottery deposits have been found. The members of the American School of Oriental Research are grateful to Mr. P. L. O. Guy, the director of the expedition, for his courtesy to us on several occasions and his generosity in showing and explaining to us what he has found.

Returning from Megiddo to the main road, the traveler might well proceed to Nazareth and thence to the nearby town of *Seffūriyeh*, the ancient Sepphoris. During July and August Professor L. Waterman of the University of Michigan, assisted by Dr. Clarence Fisher, our professor of Archaeology, began the excavation of this site. The remains of a first century Roman theater with a seating capacity of about three thousand were uncovered. Not only the tiers cut in the rock for the seats, the main entrance and exit, and part of the outside wall were discovered, but even a system of lead pipes for drainage under the pavement of the orchestra. Coins, pottery, and other small objects, chiefly of Roman and Byzantine times, were found, including rings, earrings, and bracelets, a bronze mirror, and ivory hairpins. There were also traces of an early Christian church with a mosaic pavement. Sepphoris is especially interesting to the student of the New Testament as illustrating the culture of the Gentile cities of Galilee in the time of Jesus. A second campaign is planned for the spring.

Descending from Nazareth one may cross the plain of Esdraelon to *ʿAfūleh*, not far from the ancient Shunem, and then go down the plain of Jezreel to *Beisān* (Beth-shean). Here, too, was an important center of Hellenistic culture, the city of Scythopolis, a member of the Decapolis. The great mound, however, contains ruins far more ancient than that. The work begun there by Professor Fisher and continued by Mr. Rowe has

been proceeding during the past two years under the direction of Mr. G. M. FitzGerald. The campaign begun in the fall of 1930 and reported in this JOURNAL, 1931, p. 98, continued through the greater part of February, 1931, and in the fall work was resumed and carried on until about the first of December. The tell is being cut down to the levels previously reached in smaller areas, and many interesting objects have been found. More specific information regarding the year's work is not yet available.

With both Megiddo and Beisān now being investigated in proper fashion, it is much to be desired that similar methods should be applied to their sister fortress, Taanak, which still awaits adequate study.

During April, May, and June a joint expedition of Harvard University, the Hebrew University of Jerusalem, the British School of Archaeology, and the Palestine Exploration Fund worked at *Sebastiyeh* (Samaria), where the palaces of Omri and Ahab had been found by the earlier Harvard expedition. Mr. Crowfoot, the director of the British School of Archaeology, was in charge. Harvard was represented by Professors Lake and Blake and the Hebrew University by Professor Sukenik. A brief report of the first two months of the campaign is given in the PEFQS for July, 1931 (pp. 139-142), and a more complete preliminary report, the proofs of which were kindly shown to the present writer, is to appear in an early issue.

As before, nothing earlier than the time of Omri was found. One of the most interesting discoveries was a part of the wall which surrounded the acropolis in the Israelite period. It gives a new idea of the size of the city at that time and of the progress which had been made in the art of masonry under the influence of Jezebel's countrymen. The palaces discovered by the earlier expedition were further cleared also.

The Hellenistic city, which had evidently been very thoroughly destroyed by Hyrcanus, was represented only by small objects and a few walls. Of the Roman and Herodian city, however, a great deal remained, including columns, walls, inscriptions, painted plaster, and mosaics. Among the buildings identified were houses, a temple (probably of Persephone-Kore) which was built perhaps in the first century but rebuilt in the third, and a palaestra (formerly supposed to be a theater) with plastered walls on which were names and drawings. All these afford a vivid picture of a

pagan Roman city in the heart of Palestine in the days of Jesus and the early church.

The Byzantine period also was well represented. After that the glory of the city seems to have departed, but an interesting monastery church, with partially preserved wall paintings, was excavated. Pilgrims' crosses and graffiti recalled the local cult of John the Baptist, with which the excavators are inclined to connect the pictures also.

The Israelite wall at the point uncovered seemed to be approaching a gate, but to uncover it would have necessitated digging into the village threshing floor, which was then in use. Accordingly work was resumed in October and continued until the tenth of December. Mr. Crowfoot and Professor Sukenik have kindly allowed the writer to make the following statements regarding their results. Evidences of active occupation in Byzantine times were found, explaining the fragmentary character of the earlier remains in this part of the city. The area had been the site of the Roman forum, the buildings of which were carefully examined. Sufficient remains of Israelite walls also were discovered to prove definitely that the Israelite city had included most of what is now the threshing floor. East of the village a well-preserved Roman mausoleum yielded many interesting objects. The excavation is to be continued under the same auspices in the spring.

Under the first king of Israel the capital was not at Samaria, but at Shechem. *Baldāḥ*, just south of *Nāblus* in the mouth of the valley that separates Mount Ebal from Mount Gerizim, is the site either of ancient Shechem or of the "Tower of Shechem" mentioned as a separate place in Judges 9. Excavations have been undertaken there before, but the first systematic application of modern archaeological methods to the study of the site was made by Dr. G. Welter for the *Notgemeinschaft der Deutschen Wissenschaft* in the fall of 1931. The principal objective of this campaign, which is to be followed by others if financial conditions permit, was to solve the problem of the city walls. Dr. Welter has kindly given permission to summarize his results in advance of publication. A strong double wall of masonry, perhaps the most remarkable yet found in Palestine, was uncovered. The space between the outer wall and the higher inner wall was found to be filled with packed earth, forming a slope, at the top of which, using the inner wall

as its foundation, had stood a wall of mud brick. All these, Dr. Welter believes, were built about 1500 B.C. as parts of a unified scheme of fortification. The whole area within the walls was filled in to the height of the top of the slope, making an artificial tell; there was no natural mound to begin with and no accumulation of debris. Within the area there had been a smaller and earlier fort, with a sloping rampart of packed earth which still remains at one corner. On the north and south sides of the town were found great gates. In front of the southern gate, but a little to the left, was an opening in the outer wall, indicating that the gate was approached by a ramp from the side in such a way as to expose the unprotected right sides of attacking soldiers to the defenders on the wall, as at Tiryns. Four towers, enclosing a small open square, further protected the gate. On the slope of Mount Gerizim above *Baldāḥ* Dr. Welter excavated a sanctuary of the Late Bronze Age containing, among other interesting objects, what may very well have been the *baitylos* of Baal-berith.

Proceeding to the south from *Nāblus* on the Jerusalem road and turning off to the east at *Sinjl*, one comes to *Seilān* (Shiloh). The Danish expedition which has been at work here has confined its efforts during the past year to the consolidation and preservation of its previous discoveries. Part of the site has been purchased, and a building has been erected to protect the mosaics in the church. At the Eli shrine a second mosque has been found beside the first. The work this year has been supervised by Dr. Aage Schmidt, a good friend of our school. Twice during the fall he received parties from the school at Shiloh and explained to them the discoveries made there. Further excavation will be undertaken in September and October.

At *Deir Ghassāneh*, west of Shiloh and on the western edge of the central plateau, where, as suggested in *Bulletin* No. 11 (p. 6), the ancient Zeredah, home of Jeroboam I, was probably located, and where the name is preserved at *Ain Serēdah*, a trial excavation was made last summer by Professor Albright to determine the history of the site and test its identification. The results have not yet been published.

About twelve miles south of Shiloh, though considerably farther by road, is the town of *Mukhmās* (Michmash), familiar to students of the Old Testament as the headquarters of the Philistines at the time of Jonathan's daring exploit.

A mosaic pavement with a Greek inscription was found here by the villagers and shown to Father Fernandez early in the year. The inscription reads, "Lord, remember thy servant Valens (?), with his wife and child, who zealously built and paved the most holy church." As Père Mallon remarks (*Biblica*, xii, pp. 117-119), this mosaic shows that there was a church of considerable size in the town and testifies to the intensity of Christian piety in this region in the Byzantine period.

No expeditions have been working this year at Jerusalem, but an accidental discovery of some interest to students of the topography of the ancient city is being followed up by the Department of Antiquities. In the course of repairs on the sewer which runs down the Tyropoeon Valley, almost in the center of the old city, two levels of pavement were found, one about three meters below the present level of the street and the other nearly two meters lower. They are described in the second number of the new *Quarterly of the Department of Antiquities*. Pottery was found above, between, and below these pavements, but to what periods it belonged does not yet appear. Other shafts are to be dug to secure further evidence.

Dr. Sukenik of the Hebrew University has been for some time studying the Jewish ossuaries of the period just before and after the beginning of the Christian era. These little stone chests in which the bones of former burials were gathered when a tomb was reused, are found in large numbers in the vicinity of Jerusalem, indicating that graves near the Holy City were in great demand among the Jews of that period. Among the names inscribed on the ossuaries are some familiar from the New Testament. Last January Dr. Sukenik read a paper before the Archaeological Society of Berlin and mentioned an ossuary bearing the name *Yeshu' bar Yôseph*, i.e., "Jesus the son of Joseph." Both names, of course, were common at that time, but a sensation-hunting journalist announced to the world that the bones of Jesus had been found. Whether the report was unscrupulous or merely ignorant, Dr. Sukenik, needless to say, was in no sense responsible for it. His paper is summarized (though without mention of the troublesome inscription) in the *Jahrbuch des Deutschen Archäologischen Instituts*, xlv (1931), pp. 310-315. Recently some Jewish tombs at *Hizmech* (Az-maveth), not far north of Jerusalem, have been

excavated by Dr. Sukenik. They were made with the characteristic *Kokhim* and contained ossuaries, a few bearing Hebrew inscriptions. Other tombs with ossuaries have been opened at *Es-Samû*, (Eshtemoah), south of Hebron.

In an article in *Tarbiz* (II, 2), a quarterly published by the Hebrew University of Jerusalem, and in an abridgment of this article in the *PEFQS* for October, 1931 (pp. 217-221), Dr. Sukenik has published an Aramaic inscription found in the museum of the Russian Convent on the Mount of Olives. Where it came from is unknown. Judging by the style of writing and stone-dressing, Dr. Sukenik assigns it to the same period as the ossuaries and interprets it as referring to the removal of King Uzziah's bones several centuries after his burial. Mme. Élisabeth Loukianoff (*Bulletin de l'Institut d'Égypte*, xiii, p. 99) rejects Sukenik's interpretation, though without sufficient reason, and dates the inscription in the second or third century of our era on the basis of apparent Greek influence and affinities with the Palmyrene inscriptions. The concluding phrase of the inscription was discussed by Dr. Sukenik at the November meeting of the Palestine Oriental Society.

The article by Mme. Loukianoff referred to above gives a brief description of the antiquities in the little museum of the Russian Convent on the Mount of Olives. Mme. Loukianoff and her husband, Professor Grégoire Loukianoff, spent much of last summer arranging and studying these objects. Some fine mosaics found on the spot are described and pictured also. Professor Loukianoff, in a paper presented before the *Institut d'Égypte* in December and to be published in the *Bulletin* of the Institute, has described some rock-cut steps in the Garden of Gethsemane (Greek Orthodox). They are in line with the steps by the side of the road at the Chapel of St. Stephen, near the bottom of the Kedron Valley, and Professor Loukianoff believes that both sets of steps were part of the roadway by which Jesus and his disciples came from Bethany, across the Mount of Olives, down into the Kedron Valley, and up to the Golden Gate or to what is now St. Stephen's Gate. A tomb has been cut into the staircase in the Garden of Gethsemane. If, as Professor Loukianoff maintains, this tomb belongs to the early Byzantine period, the steps certainly cannot be later. Pilgrims' writings speak of these steps: in the fifth century two hundred and fifty steps were counted between

the city and the Church of St. Mary and eight hundred from that point up to the top of the Mount of Olives, but in the ninth century there were only one hundred and ninety-five on the side of the city and five hundred and thirty-seven leading up the Mount of Olives. Today eight can be seen on the city side and seven in the Garden of Gethsemane.

In the same paper Professor Loukianoff describes an interesting tomb in the Russian property north of *Silwân* (Siloam), across the Kedron Valley from Jerusalem and south of the Mount of Olives. Egyptian influence is evident in the style of the tomb, but it is clearly Jewish and apparently belongs to the first century of our era. Later Christian paintings are still visible, though much damaged, in the interior, which consists of two chambers.

Two miles south of Jerusalem at Ramat Rachel, where ancient remains had been discovered in the course of building operations, as reported in *Bulletin* No. 41 (p. 18), some excavating was done last winter by Dr. Benjamin Maisler for the Jewish Exploration Society. Mosaics, Roman sarcophagi, and ossuaries were found, and also many evidences of much earlier occupation. These include a cyclopean building interpreted as a *gilgal*, a structure which may have been a megalithic altar, and what appeared to be a city wall, not to mention flints, pottery, and other small objects.

The railroad from Jerusalem follows a rugged valley down into the Shephelah. Just before it turns toward the north and runs out into the plain, it passes *Ain Shems*, near which is *Tell Rumeileh*, the site of old Beth-shemesh. The fourth campaign of the Haverford Expedition at this place last spring has been described by Professor Grant in the PEFQS for July, 1931 (pp. 167-170). Between the area excavated by Mackenzie and the monastery which he uncovered was a section not previously dug. This was opened up, the Arabic and Byzantine remains in it were charted and removed, and below them were found the same strata as on the rest of the site, viz., MB, LB, "Early Iron I" (1200-1000 B.C.), and "Early Iron II" (900-600 B.C.). The monastery buildings and some fortifications were also cleared, and the portion of the hill lying west of Mackenzie's work was systematically excavated. As a result, two phases of the "Early Iron" level can now be distinguished. Among the smaller finds this season were a black granite

bowl with cylindrical pierced handles, a bronze representation of a lion and lioness with a peg for attaching it to some kind of holder, a large nine-handled pot with rope moulding, and a dish with the head and fore-quarter of a boar, apparently pursuing a man whose heels alone are left.

In the southern part of the Judean plateau, a few miles north of Hebron and more than 3,000 feet above sea level, lies *Khirbet el-Tubeiqah*, the site of ancient Beth-zur. Last summer's joint campaign of the Presbyterian Theological Seminary of Chicago and the Jerusalem school at this place has been fully reported in *Bulletin* No. 43 (pp. 2-13). Clear and abundant evidence was found of occupation in the MB, EI I, late EI II, EI III, and Hellenistic periods, with more or less prolonged interruptions in LB, the first part of EI II, and apparently the first part of EI III (sixth century). The climax of the town's prosperity and importance was reached in the time of the Maccabees, when its history is well known, but between 120 and 100 B.C., like Gezer and Mareshah, it was suddenly abandoned. Numerous coins supplemented the ceramic index of chronology. One of the most difficult problems was the untangling of the intersecting walls belonging to the Maccabean and Seleucid fortresses. Many buildings, certain puzzling installations probably devoted to dyeing, tanning, or the like, and many interesting small objects came to light. Further excavation is planned in the future.

The ancient city of Gaza lies on the coast, in the southwest corner of Palestine "as thou goest down to Egypt." About four miles further south is the still more ancient site, *Tell el-'Ajjâl*, where excavation was begun by Sir Flinders Petrie in December, 1930 (v. *JOURNAL*, 1931, p. 94). The objective of the campaign, which was carried on under the auspices of the British School of Archaeology in Egypt and New York University was to elucidate the racial relations of the earliest periods in Palestine. The extraordinarily interesting results have been presented by the excavator in an article on "Tell el-'Ajjâl" in *Ancient Egypt* (June, 1931), one entitled "The Peoples of Early Palestine" in *Discovery* (October, 1931), and a brief account of "Races in Early Palestine" in *Man* (1931, Article No. 213). The earliest occupation of which evidence was found was attributed to the Copper Age, before the end of the Sixth dynasty in Egypt (about 3500 B.C. according to Petrie's chronology; about



2500 by the more generally accepted system of Breasted). A remarkable tunnel 500 feet long and a fosse belong to this period. Then comes a break, and it is believed that the Syrian kings of the Seventh and Eighth dynasties destroyed the city without occupying it. A "Canaanite" period follows, represented by well-preserved houses built of large mud bricks, with hearths, baths, and privies. Shrines with interesting ablution-basins were found also. The "Canaanite" burials are characterized by the haphazard, sprawling position of the bodies. The skeletons are short, and the doorways of the houses are correspondingly low. A high degree of civilization is indicated by the pottery, ornaments, weights, and measures discovered, as well as by the plastered walls and regularly laid out streets and houses.

In the Hyksos period the same civilization persisted, indicating that the Hyksos did not introduce a new culture but merely conquered and ruled, as Petrie says, like the Turks. That they were not mere nomads, however, is shown by their elaborate fortifications. At this time the city was twenty times as large as Troy. The house walls of yellow brick were found just below the surface, standing to a height of eight feet, with brick lintels still in place over some of the doors. Pottery from Asia Minor, Syria, and Cyprus was found in addition to native types. In the burials of this period the bodies were carefully laid out, and men and horses were buried together. The discovery that the full-sized horse was known and used in Palestine at this early date is one of the most interesting results of the campaign.

From the evidence of the first season's work it was inferred that the site had not been occupied after the Hyksos period. Noting the prevalence of malaria there which makes excavation impossible before December, Sir Flinders concluded that the mouth of the river had silted up, leaving stagnant pools, and the resulting malarial conditions had driven the inhabitants to the place where Gaza now stands. The date of this abandonment he placed at about 2000 B.C., which would correspond to about 1500 B.C. in the usual chronology.

A second campaign was begun early in December, 1931. With the hope of finding the temple and palace of the ancient city the ridge of the tell, overlooking the sea, was attacked. A wall seven feet thick, which may prove to be the wall of the

palace, has appeared. There are several puzzling problems which this season's work may elucidate.

Having reached the limits of Palestine in this direction, we must return now to Jerusalem and descend into the valley of the Jordan. Here, more than 3,000 feet below Jerusalem but only an hour away by automobile (provided you are not held up by brigands on the way, as a dozen automobiles were one day this fall), lies the city of Jericho, familiar to every reader of the Bible, though it lay in ruins during most of the time covered by the biblical narratives. The story of previous excavations at *Tell es-Sultân*, the site of the Old Testament Jericho, has been told in the *JOURNAL*, 1931, 98 ff.; in 1931, from the end of January to April, Professor Garstang carried on a second campaign, with the patronage of Sir Charles Marston and the late Lord Melchett. On his staff were Messrs. T. D. and D. E. McCown, the sons of Dean C. C. McCown, then director of the Jerusalem school. The first tomb opened by the expedition was named in their honor, "The Two Brothers." In the *PEFQS* for July, 1931 (pp. 186-196), under the title "The Walls of Jericho," Professor Garstang describes the results of the campaign. The history of the city was carried back into the Early Bronze Age, when a small city, with a wall indicating Babylonian influence, crowned the hill. The MB city was much larger and more strongly fortified. Babylonian rather than Egyptian influence still dominated its culture. An even larger and more important city existed on the site at about 1800 B.C., with a culture manifesting new influences from the North. This city was destroyed about 1600 B.C., perhaps in connection with the expulsion of the Hyksos from Egypt. In the next stage of its occupation (1600-1400 B.C. according to Garstang) the city was again restricted to the summit of the tell. To this period belong the double brick walls whose destruction is attributed to the capture of the city by Joshua. Archaeologically this catastrophe remains somewhat obscure; signs of an earthquake are noted, but there are also indications that the walls were thoroughly and systematically demolished after the occupation of the city. There is nothing to indicate a re-occupation of the site after this destruction except a fragment of Mycenaean pottery found outside the wall. The date of the destruction is still a subject of some controversy. The April



number of the PEFQS contains (pp. 104 f.) a note by Père Vincent on the subject, with Professor Garstang's reply.

Many simple and interesting objects were found in the city, such as grain, an olive-stone, a lump of dough, a charred roof-beam, bits of burnt thatch, and even a piece of rope. Someone made the brilliant suggestion that this might have been the rope by which the spies who visited Rahab were let down from the wall, and apparently one or two writers have taken the idea seriously! The full scientific report of the campaign will be found in the current number of the *Liverpool University Annals of Archaeology*. Continuation reports will appear in future numbers of the same publication.

The third campaign was begun shortly before Christmas by Professor Garstang under the auspices of Sir Charles Marston, Mr. Davies Bryan, the University of Liverpool, the Leeds Philosophical and Literary Society, and the Museum of the Louvre. The ancient necropolis has been discovered and is yielding a remarkable collection of datable objects from various periods of the Bronze Age. Professor Garstang, always a friend of the American school, has been very kind in showing us his excavation and the objects found in it.

During the spring of 1932 work will be resumed at two important sites, *Tell el-Nasbeh* and *Tell Beit Mirsim*, both of which have yielded significant results in former years but have been untouched during 1931.

## II. TRANSJORDAN

Across the Jordan from Jericho but somewhat nearer the Dead Sea is a group of little mounds which Père Mallon, Director of the Pontifical Biblical Institute in Jerusalem, began to excavate in 1929-30, as described in the *JOURNAL*, 1931, 102 ff. Work was resumed there late in November, 1930, and continued, with an interruption by the midwinter rains, until the end of March, 1931. Père Mallon has given an account of the campaign in *Biblica*, xii (1931), pp. 257-270. In order to determine the depth and stratification of the deposits, shafts were sunk in several places down to the natural sand bed. The maximum depth at the summit of the southern hill proved to be 5.5 meters. Four distinct levels, separated by ashes, were found. The first two, which covered only the center of the mound, belonged to the Neolithic or Aeneolithic

Age. The third was transitional; it was thinner than the others and not entirely separated from the fourth, which was much the largest. The pottery in this topmost stratum indicated a period from 2500 to 1900 B.C. (EB-MB I) according to the excavator. It included ledge handles which had not yet reached the wavy form, and some of the most characteristic MB forms were lacking. While the first settlers had not known the use of metals, several articles of bronze were found in the fourth level, near the surface. In spite of these evidences of cultural evolution, the civilization of all the levels was the same. It had evidently been brought in by the people who first settled the site. Clear traces of violent conflagration, followed by systematic leveling and rebuilding, were noted, and analysis of the ashes showed them to be mixed with earth, indicating that they had been exposed to the weather for some time. Cities IV and III had clearly perished by fire; in II and I this was less certain.

Another season of excavation was begun early in December, and discoveries of great interest have been made already, but a description must await publication by the excavator. The writer wishes to acknowledge here the gracious courtesy of Père Mallon in exhibiting and explaining his discoveries.

Up in the highlands of Transjordan, north of the River Jabbok, the ruins of Jerash still eloquently attest the flourishing civilization of this region in Roman and Byzantine times. The excavation of these ruins by the joint expedition of Yale University and the American School of Oriental Research in Jerusalem was continued during the spring and fall of 1931. A full account of these campaigns has recently appeared in the *Annual*, Vol. xi, and the current *Bulletin*. In the spring the pavement of the forum, dating probably from the first century of the Christian era, was partly cleared. In a series of buildings beneath the forum were discovered the first definite traces of the earlier Hellenistic city. The foundation of the colonnade surrounding the forum was traced to a depth of fifteen or twenty feet, and walls and shops were found behind the colonnade. A short distance to the north of the city a pool and small theater, connected by an inscription with the Maïumas festival, were cleared. The great hippodrome south of the city (formerly called a Naumachia) was investigated and its true nature established.

A wealth of small objects came to light also, and the body of inscriptional material was considerably enlarged.

The fall campaign was hampered by difficulties in the acquisition of land, but the work went on. In the area between the cathedral and the Artemis enclosure a remarkably complete bath was uncovered, with inscriptions dating its construction and reconstruction. Under it lay an earlier building, perhaps a temple. Adjoining the bath was found a monastic establishment. The main stairway of the Artemis enclosure was partly cleared, a series of steps stretching across the entire temple court was discovered between it and the temple, and evidence appeared of a large early building under the temenos. Several new inscriptions were found, and a systematic collection of all the inscriptions from Jerash, old and new, was undertaken, in order to make possible a comprehensive study of the city's history. Enough material for study lies above ground now at Jerash to keep the staff busy for some time without any further excavation. There is also much more still below the surface.

Mr. George Horsfield, Chief Inspector of the Transjordan Department of Antiquities, made some interesting discoveries during the year and has kindly placed at the writer's disposal the following facts. An ancient road has been found from the Gulf of Akaba to the Dead Sea, connecting a series of Nabataean stations. Bronze Age copper workings lie on both sides of the 'Arabah also. Passing through the rich district south of the Dead Sea, a centre of sugar production in the Middle Ages, the road follows the eastern shore of the sea, then runs out almost to the point of the Lisan. Apparently it was once connected by a ford, the existence of which is attested by local tradition, with the roads, guarded by the fortress of Masada, which led up to Hebron and Jerusalem. Along the River Arnon Mr. Horsfield has found a line of forts with Nabataean pottery, indicating a series of frontier posts of about the end of the first century B.C. Most striking of all, a basalt stela was discovered at Bālūt'ah, an LB site on the Arnon (now the Mōjib) opposite Aroer. It is roughly pointed at the top, apparently just as it came into the sculptor's hands. Traces of an inscription of several lines in an unidentified script may still be seen, and below these, much better preserved, is a group of three figures of a distinctly Egyptianizing character. [Cf. also *Bulletin* No. 43, p. 22.]

### III. SYRIA

For most of the facts presented in the following paragraphs the writer is indebted to the kindness of M. Henri Seyrig, Director of the *Service des Antiquités* in Syria, who generously allowed him to use the proofs of an article to be published in the *Archäologischer Anzeiger*.

At Alexandretta, at the northeast corner of the Mediterranean, a large number of Roman mosaics was accidentally discovered during the year. Antioch, including the site of the grove of Daphne, is to be excavated by an expedition representing Princeton University, the University of Pennsylvania, and the Louvre. The organization and inauguration of the work has been entrusted to Professor Fisher, who will devote the first six months of 1932 to it. Professor Elderkin of Princeton will be the director of the expedition. The Oriental Institute of the University of Chicago has been granted a concession to excavate *Tell ej-Judeideh* and *Tshetel-Hüyük*, northeast of Antioch.

The work at *Rās esh-Shamrah* and *Minet el-Beidā*, which yielded epoch-making results in 1929-30, was resumed by MM. Schaeffer and Chenet in the spring of 1931. In the necropolis of *Minet el-Beidā* a funerary temple, with its altar, and various other structures were discovered. In them were found Cypriote, Cretan, Egyptian and local pottery, besides alabaster vases, painted ivory boxes, bronze weapons and utensils, cylinders and bronze, silver, and gold ornaments. On the tell of *Rās esh-Shamrah* the area surrounding the library and the school of scribes attached to the temple yielded a quantity of new tablets, also a deposit of gold and silver and many bronze weapons and tools. Below the level of the 14th century temple appeared an older cemetery with group tombs, as many as fifty bodies being found in one of them. A large quantity of painted pottery of the familiar Canaanite style, with no trace of Mycenaean or Cypriote influence, was found here. In addition to weapons and ornaments, a number of scarabs and a stela of the wife of Senusrit II were found, indicating that the cemetery, in part at least, belongs to the time of the Twelfth Egyptian dynasty.

M. Maurice Dunand has continued his work at *Jebeil* (ancient Gebal or Byblos). Problems connected with the great temple have been cleared up, and the imposing wall surrounding

the acropolis has been investigated. Under the wall and on the native rock on which it rests was found a foundation deposit of eight jars containing the bones of infants.

The magnificent Crusaders' castle of *Qal 'at el-Huṣn* (Krak des Chevaliers) in the mountains northeast of Tripoli is being repaired, the Arab village within the walls is being moved out, and steps are being taken to acquire the property for the French government. The Byzantine city of *El-Bara*, northwest of *Hama* in the mountains has been mapped, and new epigraphic material has been collected. At *Apamea*, *Qal 'at el muḍiq*, north of *Hama*, a Belgian organization has been excavating since the fall of 1930 and has cleared a number of important architectural remains.

Perhaps the most promising site in Syria is *Hama* (ancient Hamath) on the Orontes, where Professor Harold Ingholt of the American University of Beirut, a former Thayer Fellow of our school in Jerusalem, began excavating last spring. As shown by preliminary soundings, the site was occupied from about 3000 B.C. to the sixteenth century A.D. Only the Arab level was excavated last year, though the Byzantine stratum was reached in a few spots and a number of much more ancient objects, which must have been found or inherited by the later inhabitants, were discovered. Great quantities of Arabic glass, pottery, faience, vessels of bronze and silver and coins were found. As the excavation proceeds, important light on the history of civilization in the Near East may be confidently expected.

The *Service des Antiquités* is doing excellent work in the conserving and restoration of architectural monuments. A funerary monument at *Hermel* is being restored. The important task of preserving the famous ruins at *Baalbek* has been seriously undertaken, and the government of the Libanese Republic has established a fund of a million francs for this purpose. Similar work is being done at *Palmyra*. The people living within the great temple of *Bel* have been moved out and a new village built for them. The arch in the street of columns and the small temple of *Ba'al Shamn* are being restored and reinforced and several tombs are being cleared. Many new inscriptions have come to light in the process. At *Qana'at* (*Cánatha*) in the *Haurān* a structure which was in imminent danger of collapse has been dismantled and rebuilt, stone by stone.

The National Syrian Museum has excavated some tombs at *Tsil* (*Tharsila*) and *Tell el-Ash*

*ari* in the *Haurān*. At the latter place interesting objects of the third Christian century were discovered.

In northeastern Syria the Roman-Byzantine *limes* is being explored. At *Tell el-Aḥmar* (*Til-Barsip*) on the upper Euphrates MM. Thureau-Dangin and Dunand, representing the *Académie des Inscriptions*, the French Ministry of Public Instruction and the Museum of the Louvre, have cleared a palace of Tiglath-Pileser III and a tenth-century necropolis. Interesting paintings were found in the palace and from the tombs came over a thousand intact vases, of considerable importance for the chronology of North Syrian pottery.

The Yale University expedition at *Dura-Europos* has cleared a number of buildings and brought to light many interesting objects and pictures. Interesting graffiti, which vividly illuminate the economic life of the city in the third Christian century were found in the houses and shops.

Reviewing the progress of archaeological research in these lands at the end of the Mediterranean, one is impressed by the increasingly scientific methods used. The former practice of digging a few trenches and sinking a few shafts is no longer regarded as affording adequate knowledge of a site; neither is it now respectable to neglect the significant evidence of insignificant-looking bits of pottery. Extraordinary care and great ingenuity are devoted to the recording, mapping, drawing and photographing of everything that is found. In archaeology, as in detective work, one cannot tell in advance what little point, apparently of no significance, may afford the clue to an important discovery. What is meaningless in itself may be important in relation to other facts.

The spirit of co-operation between investigators of various institutions and nationalities in Palestine is very gratifying. Visiting the excavations of other workers and comparing notes with them is a well-established practice and doubtless prevents many mistakes. Of course it does not remove all differences of opinion. The chronological problem of *Jericho* is an example of the points on which experts may draw different conclusions from the same evidence. But this only illustrates the necessity of sharply distinguishing between facts and their interpretation. Here, too, progress is evident. The time has gone by when an excavator could confidently label every

standing stone a *massebah* and every aggregation of "cup-marks" a Canaanite place of sacrifice. A structure like the plastered installation found last summer at Beth-zur gives immediate contact with the actual life of a bygone age; it is real and indubitable evidence.

One thing which strikes an American visitor to the excavations in Palestine is the dearth of American archaeologists, even on what are known as American expeditions. Money from America is making possible much of the work that is being done, but it is being done and even directed all too largely by men of other nationalities. Science, of course, is international. We cannot have too much co-operation; indeed it is best to

forget distinctions of nationality in any scientific enterprise. One does not like to think, however, that America can furnish only money and must draw upon other countries for the brains and ability. There are some American archaeologists at work in Palestine and Syria and a few young men being initiated into the mysteries of the science, but there is room for more. The American School of Oriental Research offers an opportunity for young Americans who would like to take up this fascinating work.

MILLAR BURROWS

THE AMERICAN SCHOOL IN JERUSALEM

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## BOOK REVIEWS

OLD BULGARIAN CHURCH ARCHITECTURE. STARO-BULGARSKATA TSERKOVNA ARKHITEKTURA, by *B. Filov*. Publications of the Bulgarian Academy of Science, Vol. XLIII. Pp. 59+XX pls. Sofia, 1930.

Professor Filov, the indefatigable Director of the Bulgarian Institute of Archaeology, has here prepared a short history of the old Bulgarian church architecture from the earliest times to the Turkish conquest. He lays especial stress upon the pre-Bulgarian ruins, for prior to the sixth century there was a considerable Christian population in the country, and the remains of this period show the influence of the basilica type, especially in its Asia Minor forms. After the conversion of the Bulgarians, the architecture of the First Bulgarian Empire seems to have been dominated by this older type of building, and any additional influence came from Asia Minor and Armenia. This idea is especially attractive because of the great rôle which various Asia Minor cults and heresies played in Bulgaria and in the creation of the Bogomils, the most striking of the heretical or anti-Christian movements to rise in Bulgaria and spread throughout Europe. It is only in the third period of the Second Bulgarian Empire, after a century and a half of Byzantine domination, that we find actual influence from Constantinople in the Bulgarian religious architecture, and perhaps the type of decoration used from the twelfth century was adopted in Constantinople from the Slavs rather than by them in Bulgaria. Taken as a whole, the book is a valuable guide to the early Christian remains in Bulgaria, and it will be very useful to all who are interested in tracing the various influences in the Christian Balkans during the golden periods of the Bulgarian Empire.

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SYRIA PUBLICATIONS OF THE PRINCETON UNIVERSITY ARCHAEOLOGICAL EXPEDITIONS TO SYRIA IN 1904-05 AND 1909. Division I. Geography and Itinerary, by *Howard Crosby Butler, A.M., Frederick A. Norris, C.E., and Edward Royal Stoever, C.E.* Edited by members of the expeditions. Pp. ix+108, with illustrations, maps and an index of place-names. Leyden, 1930. The first part of this narrative is based on the

notes and journal of Mr. Norris. The second, covering the 1909 expedition, was prepared by Professor Butler, the leader. Both accounts are replete with human interest, bringing out the lighter, the unofficial side of the life of the members. We see them in their camp, en route on horseback, visiting Bedouin chiefs, enjoying Druze hospitality, treating all kinds of maladies—and effectively—with pills and with boric acid, and participating in local affairs. The climax is reached when the Druzes of Hawrân, seriously and with every good intention in the world, offer Butler the governorship of their district “which was not legally theirs to offer” (p. 107), as a measure of self-protection against their Bedouin neighbors to the east. But that is not all to be had from the book. Embedded in the narrative are bits of scientific information—historical, archaeological, topographical and geographical—of great importance. Especially valuable are the many pictures of the ruins and sites taken by the expedition and the numerous maps based on surveys by one of its members, Mr. Norris. This volume will undoubtedly prove a useful companion to the other worthy publications by the Princeton expeditions.

The ever-vexing problem of transliteration comes up. The system used is that of reproducing the names phonetically as they were heard pronounced in colloquial Arabic. This is objectionable on more than one score. For one thing the same name may be pronounced differently by different persons in different localities and at various times. “Umm” (p. VII) becomes “Imm” (p. 6) and reverts to “Umm” (p. 10). “Zabtlyeh” (p. 84) and “Zerkâ” which occurs on the line just below give the impression that they both begin with the same character in Arabic, but they do not. If the classical form was given in each case side by side with the colloquial there would be no difficulty in recognizing the original. Why should one spell “idj-Djimâl” (p. 90, etc.), “Hadjdj” (p. 10), when the authorized and simpler forms are: al-Jimâl, Hajj? Suppose that an Arab traveller in America were to reproduce in his Arabic account of the journey such names as “New Jersey” and “Missouri” as he might have heard them pronounced in certain quarters, and that a few centuries later his books



were translated into English, what reader would then recognize in the garbled forms the original names of these two states? Another minor point in the volume is the use of certain common nouns in their colloquial forms, e.g., 'abdyeh (p. 21), kaffiyeh (p. 33), side by side with the anglicized names of the native servants of the expedition, e.g., "Joseph" (p. 21), "Peter" (p. 33). The Christians of Syria referred to as "orthodox Greeks" (pp. 16, 30) are Greek Orthodox.

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PRINCETON UNIVERSITY

ZENON PAPYRI IN THE UNIVERSITY OF MICHIGAN COLLECTION, by C. C. Edgar. University of Michigan Press, Ann Arbor, 1931.

With equal generosity and good judgment the late Professor Francis W. Kelsey, supported by his colleagues at the University of Michigan, placed in the competent hands of C. C. Edgar the editing of those of the Zenon papyri which are in the possession of the University of Michigan library. Mr. Edgar's skill in reading the Greek papyri, and his special acquaintance with the Zenon materials which he has gained in the editing of hundreds of this group from the collection in the Cairo Museum, are supported by an unusual knowledge of the social and economic conditions which have prevailed in Egypt and which give the framework for the life depicted in these documents. The result of Edgar's scholarship is here embodied in a handsome volume which presents one hundred and twenty Zenon letters, accounts and memoranda, including the fragmentary numbers. Only two of these (Nos. 28 and 70) have previously been published. The volume is marked by an unusual number of identifications of Zenon fragments in the Michigan group as belonging with other fragments which have already appeared from the Florence or the Cairo collections or are at Cairo still unpublished. There are no less than sixteen of such joinings of widely scattered parts, which is in itself convincing testimony of the editor's knowledge of the Zenon archive.

In this volume Edgar has reverted to his earlier habit in dealing with the Zenon papyri by appending translations of those documents which warrant it by their completeness. These translations are characterized by clarity and brevity of expression, and thorough knowledge of the Greek. The frontispiece of the volume is a reproduction of an airplane photograph of the site of Philadelphia taken by the British Air Force in 1925.

In view of the progressive destruction of the site by the natives, who use the ancient sun-dried brick from the walls of the buildings for fertilizer, it is very important to have this in print. In addition there are five plates giving excellent reproductions of six of the better preserved and characteristic pieces.

The Michigan collection contains an unusual number of interesting documents. To archaeologists, with their necessary interest in the social significance of the new material finds, No. 84 (reproduced in the text), will be an outstanding piece, despite its bad state of preservation. It is a memorandum addressed to Zenon in which Heraclides proposes to build a fence (χάραξ) along the large canal where it skirted the west side of Philadelphia. The bed of this old canal can still be traced upon the airplane photograph. There is an architectural plan drawn by Heraclides, at the bottom of the memorandum, showing the proposed fence. It was to extend along the east bank of the canal from the house of Artemidorus, physician to the great Apollonius, past the temple of Hermes to the temple of Poremanres, or Amenemhet III. The locations of these buildings are indicated on the diagram. The purpose of the fence, which was to be built of wood (reeds, I take it), brick, and leather skins, was to prevent the pigs from the town from being washed away and drowned at the time of the flood. A temple to Amenemhet III is peculiarly fitting in this new Graeco-Egyptian town which was a center of colonization of land newly reclaimed from the lake. For, despite the 1700 years which intervened between their reigns, Amenemhet III was the immediate predecessor of Ptolemy Philadelphus in the great project of land reclamation in the Fayûm.

In letter 100, which is to be dated about 257 B.C., a certain Callicrates appears in connection with the collection of the navy tax. With considerable probability Edgar identifies him with an admiral of Ptolemy II who bore the same name. If this identification is correct, one of the arguments falls away by which Beloch and W. W. Tarn sought to date a well-known and important letter of Ptolemy Philadelphus to the Milesians. It is the letter in which the much disputed "Ptolemy, the son," appears. No. 100 is cited here to illustrate the manner in which any one of these documents found in Egypt, in itself perhaps of minor import, may affect the wider historical issues of the period.

As an introduction to this volume Edgar has given us in sixty pages the benefit of his great knowledge of the Zenon archive, in a succinct and informative series of discussions. These include: the historical background; the life and position of Apollonius, the dioecetes; the changing position and activities of Zenon, his trusted and competent agent; the form of the papyri; and a very useful and important résumé of the complicated problems of the chronology and calendar systems in vogue in Egypt at that time.

This volume of Michigan papyri is recommended, along with Rostovtzeff's study, "A Large Estate in Egypt," to all serious students of the classics, ancient archaeology, and the social and economic history of the Hellenistic period. It is the work of a master craftsman in this particular field.

WILLIAM LINN WESTERMANN  
COLUMBIA UNIVERSITY

THE CAMBRIDGE ANCIENT HISTORY, Volume VIII, Rome and the Mediterranean. Edited by S. A. Cook, F. E. Adcock, and M. P. Charlesworth. Cambridge University Press. The Macmillan Co., New York, 1931. \$9.50.

In this volume the history of Rome is the central theme, and the period covered extends from the beginning of the Second Punic War to the Gracchan Age. While the defeat and final destruction of Carthage eliminated the possibility of a Semitic civilization dominating the ancient Mediterranean world and definitely assured the preservation of Greek culture, Rome's achievements brought no great intellectual awakening to the imperial city, and no school of distinctly national art came into being. The city was filled with products of the minor arts from the East, and Greeks were employed to execute whatever artistic productions their masters or patrons demanded. In religion the Romans turned from their old animistic beliefs to anthropomorphic conceptions of the gods, but their patron deities were still worshipped in temples of tufa covered with stucco. Although the discovery of an excellent kind of concrete in the latter half of the second century prepared the way for the massive structures of a later age, the practical Romans were as yet little concerned with the adornment of their city, and their tribute was spent in building roads, aqueducts, and other utilitarian structures. In the Eastern Mediterranean, however, the patronage of the Attalids

and Seleucids and the commercial prosperity of Rhodes gave employment to Greek artists of all kinds, and it is in these districts that we find the major achievements of the Hellenistic age in sculpture and architecture. The chapters on Thrace and the Bosphorus by Kazarow and Rostovtzeff respectively deal in considerable detail with the archaeological finds and accomplishments of these more remote peoples; but in this volume the chief attraction for the archaeologist is the chapter on Hellenistic art by Ashmole. His description and interpretation of the artistic achievements of the age is outstanding.

ALLAN CHESTER JOHNSON  
PRINCETON UNIVERSITY

THE CAMBRIDGE ANCIENT HISTORY. Third Volume of Plates prepared by C. T. Seltman. Cambridge University Press, The Macmillan Co., New York, 1931. 12/6.

The second volume of plates drew largely for its material on Greek art at the height of its achievement. The hundred plates of the third volume illustrate the borrowings and adaptations of Greek art in the outer fringes of the Mediterranean. The Bosphoran kingdoms, Thrace, Asiatic Greece, and the islands of the Aegean now contribute the best artistic productions. Probably the decline in religious faith accounts for the fact that few temples were erected in this age. The Great Altar of Pergamum is the most notable religious dedication, and architecture for the most part is devoted to utilitarian ends. In Hellenistic sculpture the trend is towards realism, and the illustrations show clearly that this art is far from decadent. The frescoes and mosaics of Pompeii are vigorous in execution, and, though most of them are badly preserved, they indicate that good standards still prevailed. In Thrace and the Bosphoran kingdoms the minor arts were held in esteem, and the jewelry found in the graves of the wealthy gives evidence that they demanded a relatively high standard from their craftsmen. The Iberian art, on the other hand, is primitive, and the meager finds in Spanish excavations show that the native population had profited little from their contacts with other peoples, or from the richness of their own mineral wealth. Mr. Seltman has also included several plates to illustrate the various coin types which may be found in the Mediterranean world.

ALLAN CHESTER JOHNSON  
PRINCETON UNIVERSITY

LES TEMPLES DE KARNAK, FRAGMENT DU DERNIER  
OUVRAGE DE GEORGES LEGRAIN. Published by  
the Fondation Égyptologique Reine Élisabeth.  
Pp. vii+270. Brussels, Vromant and Co., 1929.

For twenty-two years, from 1895-1917, Georges Legrain directed the work of excavation and restoration of the great temple enclosure at Karnak for the Egyptian Government. His labors there gave him a knowledge of the site such as no other man has possessed. During the course of his residence there Legrain began to prepare a great work on the temples of Karnak, and in 1913 he outlined a proposed table of contents which has been published as an appendix to the book here reviewed. The plan envisaged a history of the site, a review of the observations of visitors from the time of Herodotus to the present, a chronological record of the various temples, a description of the cults served in them and a detailed description of all the buildings. Professor Capart states in his preface that the seven chapters now published constitute about half of the projected work. They comprise a minute description of the western approach to the great temple of Amūn, of the first pylon and its adjoining court, including the temple of Rameses III, of the second pylon, and finally of the great hypostyle hall of the XIXth Dynasty. Professor Capart seems to believe that a large part of the remainder of the work may have been completed, and it is greatly to be hoped that other chapters may be found among the papers of Legrain, whose death, due to his devotion to his task, was a serious loss to Egyptian archaeology.

Beginning at the approach to the great temple, Legrain reminds us that the platform which forms the western end of the avenue of sphinxes is an altar and that the quay of which the altar is a part bordered what was probably a canal, separated at this point at least as early as the XIXth Dynasty from the main stream of the Nile, and leading southward to the Luxor temple. Legrain believes that the obelisks on the corners of the altar may have served as mooring-posts for the great barque of Amūn at the time of the ceremonial transport of the image of the god to Luxor and back again. Here also in the XXVth and XXVIth Dynasties came the chief priestess of Amūn, a princess of the royal line, to take up her abode at Karnak as consort of the god. Legrain agrees with the opinion that the huge and unfinished first pylon was erected at least as early as the XXIIInd Dynasty, having been built before

the walls which were erected under that dynasty to connect it with the second pylon. The author shows that the cornice of the central doorway of the pylon was not less than 26 meters above the ground. This space was closed by two pivoted wooden doors not less than 18.65 m. in height and 4.60 m. each in width. Legrain has calculated that these doors with their bronzesheathing and fittings must have weighed together some 10,000 kilos.

Legrain describes the remains of the mud-brick scaffolding still standing on the outer and inner sides of the first pylon and remarks (p. 38) that he knows of no other Egyptian monument which has retained its ancient scaffolding. There is also, however, the pyramid of King Amen-em-hèt I at Lisht where the Expedition of the Metropolitan Museum of New York found portions of the mud-brick ramp in place on the north side of the pyramid with remains of the timber track up which the stones were hauled (*Bulletin Met. Mus. of Art* for Oct. 1914, p. 220 and fig. 16. Cf. also *id.*, Dec. 1924, Pt. 2, p. 36). In describing the colonnade of Taharka, Legrain makes a good case for the theory that the columns bore images of divinities, citing such columns represented in reliefs. He admits, however, that he saw no trace of a mortice in the top of the one standing column which he examined from the top of the first and second pylons. The author reminds us that the temple of Sethy II in the forecourt was one of the places of rest for the images of Amūn, Mūt and Khonsu when they were carried from the great temple to be placed in their barges for the annual visit to Luxor.

In the description of the decorations of the walls of the temples the reader will find much interesting mythological material, such as the nine sacred trees in the procession of Amūn Ka-mautef in the temple of Rameses III. The cult of this form of Amūn was highly important at Karnak, but Legrain seems justified in his opinion that his ithyphallic image did not make the journey to Luxor. The author shows how in some respects at least the goddesses Mūt, Sakhmet and Menhet were one and the same. He shares the belief, well-founded as regards the New Kingdom, that animal-headed gods shown in ceremonies often represent masked priests taking the parts of those divinities. In regard to the second pylon, Legrain brings forward the interesting suggestion (p. 133) that it was begun by Harem-hab, although he has no direct evidence to support it. Incidentally we are informed that the flag-staves

erected before this pylon must have had a thickness of about 1 m. 50 at their bases and have been about 40 m. in height. In the Ptolemaic doorway of the second pylon are Ptolemaic representations of Rameses II and III.

On pp. 150-51 Legrain speaks of the little edifice erected against the inner side of the pylon by Rameses I to house a stela, probably once plated with gold, before which was an alabaster floor slab made from a block from a sanctuary of Thutmosë IV. He believes such a slab was the "silver ground" on which the king stood for certain ceremonies and on which the gods are said to repose in the house of Amün.

The author concludes that probably no part of the famous hypostyle hall was built by Rameses II and that little of the decoration is due to that king, the work having been nearly completed during the lifetime of his father Sethy I. His exposition of the method of constructing the columns of the hall is of great interest.

It is unfortunate that a plan of Karnak was not reproduced in the book. There are references to parts of the temple by letters and numbers that are useless without a plan. There are evidences of somewhat hasty editing, such as the occurrence of several different spellings of certain proper names, and mistaken or outworn readings of a number of Egyptian words and phrases. Among the latter may be mentioned *retou* for *rmt* (p. 44), the phrase *dy 'nh* rendered "qui donne la vie" (pp. 104, 106, etc.), *T'wy* called "deux mondes" (p. 119), though it is sometimes translated "double terre." The word *d'm* is sometimes called "electrum" (e.g., p. 119) and on p. 120 it is transliterated "ousem." There are also a good many misprints. The words "nord" and "sud" are reversed on p. 35, "est" appears for "ouest" on p. 52, "sud" for "ouest" on p. 56, "ouest" for "est" on p. 76. In a few cases the references to illustrations are incorrect. These errors, however, are not numerous enough to detract seriously from the value of the work.

There are many architectural observations of great value and of high interest also are the detailed descriptions of all the scenes in relief on the walls of those parts of the temple dealt with. The processions of the divine barques and many other ritual scenes are discussed with great thoroughness. Professor Capart has done well to preserve these chapters of Legrain's great work.

LUDLOW BULL

THE METROPOLITAN MUSEUM OF ART

PROFOS SUR L'ART ÉGYPTIEN, par Jean Capart.

With a Preface by Ludlow Bull. Pp. 307, figs.

188. Édition de la Fondation Égyptologique Reine Élisabeth, Brussels (Vromant), 1931. Fr. 75.

This publication is merely an edition in French of Capart's *Lectures on Egyptian Art*, brought out in 1928 by the University of North Carolina Press—the latter book being, in turn, compiled from lectures given by Capart while on tour in the United States in the winter of 1924-1925. Since, however, the American edition was not reviewed in the *Journal*, a few remarks on the present edition will be required.

The six "chapters"—obviously lectures—included in the work are entitled: "Quelques chefs d'oeuvre de l'Art égyptien," "Problèmes d'esthétique égyptienne," "Les Merveilles de l'Art industriel," "Les Ruines de Thèbes," "Les Belles Histoires des Fouilles," and "La Vallée des Rois et la Tombe de Toutankhamon." In the first three chapters M. Capart, in a pleasant if somewhat rambling manner, leads us by the hand through the better known Egyptian tombs and temples and through many of the Egyptian collections of Europe and America, pausing from time to time in front of a vitrine to explain briefly ancient Egyptian conventions in relief sculpture (p. 30), ancient Egyptian burial customs (p. 61), the purpose of the Ka-statue (p. 68), etc., etc. Chapter IV gives a two days' tour of Thebes, complete except for the discomforts of the train ride up and back. Chapter V is composed of excerpts from the excavation accounts of Mariette, Maspero, Loret, Legrain, Davis, Carter, and Winlock, interlarded with remarks of a highly romantic nature on the part of the author himself. The last chapter covers the now familiar events leading up to and following the discovery of the tomb of Tût'ankhamün.

For the most part, the truth of the statements, made in this book, on ancient Egyptian art, life, history, etc., is too generally accepted to leave way for question. In view, however, of the great mass of data on and objects of the Predynastic Period discovered within the last forty years, it is difficult to understand the sentence on p. 60, which says, in referring to the art of the Dynastic Period: "Il est probable que, si nous pouvons découvrir un jour des documents sur les origines de l'art égyptien, ceux-ci nous reporteront à des milliers d'années en arrière." Exception might also be taken to the reference on p. 164 to the



"faiblesse des frontières naturelles d'Égypte." Finally,—while we are recounting the discovery of the tomb of Tût'ankhamûn—it is just as well to note that the tomb was discovered and opened in November, 1922, not in 1923, as stated on p. 269.

There are 188 illustrations in the book—mostly photographs. These divide themselves, by source, into three groups: (1) Snapshots taken by Capart, many of which are excellent; (2) prints obtained from the files of European and American museums or purchased at photograph stores in Egypt; and (3) re-photographed illustrations from other publications.

*Propos sur l'Art égyptien* is good, frequently interesting, and, at times, charming reading; but one cannot honestly say that it would make an addition of any value to the library of a serious student of ancient Egypt or of ancient art in general.

WILLIAM C. HAYES, JR.

LUXOR, UPPER EGYPT

DÉTAILS RELEVÉS DANS LES RUINES DE QUELQUES  
TEMPLES ÉGYPTIENS, by *Edouard Naville*.  
With an English translation by D. N. Belaieff.  
Pp. 67, pls. 54, figs. 11. Geuthner, Paris, 1930.

Part I of this work publishes the little known reliefs in the "Slaughter Court" and the adjoining chamber (*Baedeker*, plav. opposite p. 253, Chambers C and A, respectively) of the temple of Sety I at Abydos; and the series of important reliefs on the exterior and interior of the walls of the fore court and in two of the chambers of the adjacent temple of Rameses II. This section of the publication is the result of work conducted at Abydos under the direction of Edouard Naville during the winters of 1910-1914. The plates (i-xxxvii) are line drawings in ink made, for the most part, by Madame Naville and collated by Naville himself. Naville's death in 1926 left the text which was to accompany these plates unfinished and the able and interesting description of the plates which actually accompanies them is by Gustave Jéquier.

Part II deals with the ruins of the magnificent and important granite temple of Isis at Behbeit el Hagher (XXX Dynasty-Ptolemy III), situated in the center of the Delta, on the Damiette branch of the Nile, about 110 kilometers due north of Cairo. The drawings of a number of the very fine reliefs from this temple given in plates 7-15 are taken from squeezes made by Naville in 1885 and by Riamo in 1895 and 1897. The text ac-

companying these plates (compiled from notes made by Naville) and the excerpts from the accounts of eighteenth-nineteenth century travelers regarding the site are arranged by Madame Naville. The photographs of plates 1-6 were made by the Rev. MacGregor and by the late Max Van Berchem.

The line-drawings of plates 16-17 reproduce a few fragments of relief from the nearby temple of Anhur Shu at Samanûd (Sebennytyos)—also of granite and also XXX Dynasty-Ptolemaic Period. The *Appendix* to the main work, which contains a brief account of Samanûd and a brief description of the two plates, is compiled by Madame Naville from notes made by her late husband.

Among the Abydos reliefs shown and discussed in this volume, those on the exteriors of the west and north walls of the Rameses II temple are of major interest. These reliefs—a continuous series of scenes—depict the famous battle of Kadesh, fought by Rameses II against the Hittites, in his Fifth Year. Not only is the fight itself represented, but also the events leading up to it and much of the aftermath. The battle is depicted, elsewhere, in the Ramesseum at Thebes, in the temple of Amûn at Luxor, and in the rock temple of Rameses at Abu Simbel. A description of the battle is given in a papyrus in the British Museum, known as the "Pentaur Poem." Here the battle is stated to have been recommenced on the day following its inauguration—an assertion apparently corroborated by an episode appearing in the Abydos reliefs (plates xv-xviii), "which does not seem to be part of the battle of the first day."

The plates (photolithographs) are simple line-drawings in ink, distinguished for their clarity and attention to detail. M. Jéquier's translations of the texts appearing in the reliefs of both the Sety and Rameses temples are occasionally open to question; but, since the original inscriptions are in all cases clearly shown in the plates, this is of no great consequence. In general, the writer's descriptions of the reliefs are extremely enlightening and his interpretations of individual scenes and of the sequences of scenes admirable.

The ten plates of drawings of the reliefs of the temple of Behbeit el Hagher and the eleven photographs of the ruins of this temple—while making no pretense at being anything like a complete publication of the monument—give an excellent idea of the splendor and interest of this almost un-



known building. Constructed entirely of gigantic blocks of red and black granite, this great temple, owing probably to an earthquake in antiquity, now lies in a jumbled mass of ruins 80 meters long by 50 meters wide, and rising at times to a height of 5 meters. Only the reliefs on the blocks of the original upper courses of the building are now accessible for copying, the lower courses being buried deep under the enormous heaped-up fragments of their fellows. For this reason, in referring to the drawings reproduced, Madame Naville explains that: "... the blanks in the bas-reliefs are innumerable and the reconstructions which have been carried out are incomplete and uncertain. The only thing that it has been possible to readjust accurately is part of a naos in black granite" (plates 8-10). The principal wish of the authors in bringing out their few drawings and photographs of Behbeit el Hagher and those of Samanûd is to give "an idea of the results which could be obtained by the clearing and restoration of these imposing ruins, the site of which deserves to be better known." However extensive such a task might prove to be, the glimpses of the remains of the temple given in this book indicate beyond all doubt that the job would be well worth the undertaking.

The Metropolitan Museum in New York is fortunate in possessing several fragments of relief from the temples of both Behbeit el Hagher and Samanûd. These are on display in the XIIIth Egyptian Room. The block, from Behbeit el Hagher, bearing the accession number 12.182.4A, purchased by the Museum in 1912, is of especial interest, since it is the same piece from which Naville took a squeeze, at Behbeit el Hagher, in 1885, the drawing from the squeeze being reproduced in plate 12 of the present publication. In conclusion, let it be said that Madame Naville and M. Jéquier are to be congratulated upon having produced a book which is a real addition to our knowledge of ancient Egyptian monuments. As unselfish in purpose as it is scholarly in character, this volume is an altogether fitting memorial to Edouard Naville, whose *Todtenbuch* and *Deir el Bahri* publications are still the standard works on their subjects.

WILLIAM C. HAYES, JR.  
LUXOR, UPPER EGYPT

PALÄSTINA UND SEINE KULTUR IN FÜNF JAHR-  
TAUSENDEN NACH DEN NEUESTEN AUSGRA-  
BUNGEN UND FORSCHUNGEN DARGESTELLT.

Von Professor Dr. Peter Thomsen. Dritte Auflage. Pp. 120, pls. 16. J. C. Hinrichs'sche Buchhandlung. Leipzig, 1931. M. 3.60.

This is the third edition of a book which appeared first in 1909 and which has been so greatly appreciated that it has now grown into a much larger book with the addition of sixteen plates. It comes from the hand of Dr. Peter Thomsen, the indefatigable bibliographer of Palestine, whose *Palästina-Literatur* has now reached its fourth volume (1927), and whose scholarship has been manifested in many notable monographs on Palestine. This small handbook is typical of the German method of "popularizing," but never vulgarizing the results of science, coming as it does from a scholar who has no superior in information on the subject; and that such high class publication meets with due applause in Germany appears from the fact that the book has reached an edition of ten thousand. Such work is an example that may well be imitated in our English presentation of archaeology to the general reader; it is a vast pity that we cannot print so cheaply in this country, the present volume selling for only M. 3.60. It is a model of compact presentation of an age-long and complicated field of study, yet with enough of detailed description and specific reference to avoid the vague. Two preliminary chapters give a short history of the explorations and excavations in the land and the means of chronological determination; there follow chapters on the Stone Age, Bronze Age, Iron Age, the Jewish-Hellenistic and Roman-Byzantine Ages. Under each chapter are treated the pertinent subjects of ethnology, arts, religion, etc. The beginnings of the history are now thrown far back by the discovery of remains of Palaeolithic man, c. 3; and the great advance in archaeological enterprise since the Great War is summarized, pp. 14 ff., a refreshing exhibit, in which it is agreeable to see the part played by American scholars and expeditions. At the end of the book is an Index of important literature, a feature of which is the notice of the chief literature on each of the archaeological sites that have been excavated and studied, 27 items in all. The summary of material contained in the book is of use even to the professional student, and can be recommended to all scholars as well as laymen who desire an introduction into the archaeology of Palestine.

JAMES A. MONTGOMERY  
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MÉMOIRES ARCHÉOLOGIQUES PUBLIÉS PAR L'ÉCOLE FRANÇAISE D'EXTRÊME-ORIENT, TOME II. *Le temple d'Angkor Vat*. Deuxième partie: La sculpture ornementale du temple, 2 vols., with an introduction by Victor Goloubew. Paris, les éditions G. van Oest, 1930.

These two volumes are a continuation of the first part of the publication of the French School which was reviewed in *A.J.A.*, Vol. XXXV, No. 1, p. 123 f. As in the case of the previous volumes, the prefatory text is negligible and of slight value. On the other hand, the illustrative material is worthy of praise both for the quantity of reproductions and the excellence with which they are executed. Particularly fine are the details of low relief, many of which remind one of early Renaissance carving of the West in technique.

P. B. COTT

PRINCETON UNIVERSITY

THUCYDIDES IM LICHT DER URKUNDEN, by *Walter Kolbe*. Pp. 48. Verlag von W. Kohlhammer, Stuttgart, 1930.

Professor Kolbe has performed a valuable service in showing how the inscriptions from the early years of the Peloponnesian War can be used to make more definite the time relation of events that occurred between the expedition to Corcyra and the attack on Plataea. The fact that Potidaea paid tribute as late as the spring of 432 (*S.E.G.* V, 22, Col. II, line 70) is sufficient evidence that Potidaea was not at that time in revolt from Athens. One must agree with Kolbe that Lipsius' conjecture, which changes the numeral 6 to 16 in Thuc. II, 2, 1, is no longer possible. The epigraphical difficulties involved in Lipsius' conjecture have been known since 1913, when Fimmen (*Ath. Mitt.*, 1913, pp. 231-238) assigned the correct date to *I.G.* F, 212; but Kolbe's new analysis of the evidence is timely, because the old conjecture has been again revived by Jacoby (*Nachr. d. Gött. Ges. d. Wiss.*, 1928, p. 19). Kolbe goes even farther, and shows that the first expenses for operations against Potidaea were incurred in the third prytany of 432/1 (*I.G.* F, 296). It follows that the traditional text of Thuc. II, 2, is correct in giving the date of the battle at Potidaea as six months before the attack on Plataea. To the present reviewer the argument seems eminently sound. The epigraphical record and the text of the historian are in entire accord.

This is only one of many points on which defi-

nite conclusions have been reached. The monograph contains a carefully revised table to show the sequence of events from 435 to 432 (pp. 42-45). As historian, Kolbe has not neglected the broader aspects of the problem with which he deals. After determining a sound chronological sequence of events, based on the text of the author and the epigraphical records, he proceeds to show that the supposed inconsistencies between Thuc. I, 125 and II, 2 (pp. 26-28) and between Thuc. I, 56-57 and II, 2 (pp. 28-41) are, after all, not real. These passages have given rise to much discussion of the problem of an "editor" of Thucydides. Kolbe justly remarks that so far as these passages are concerned there is no need to assume an editor for the first book. This vindication of the author's text and of its historical consistency is supported by good argument, and should be welcomed by all students of Athenian history.

There appears as an appendix to the monograph a revised text of the inscription (*I.G.* I<sup>2</sup>, 296) which gives the expenses of 432/1 borrowed from Athena. Some of the restorations given in the Corpus have been changed, though for the most part the changes do not alter the general sense of the document. One might wish that the new fragment *S.E.G.* III, 33, had been included in the text of lines 34-37. The new fragment shows that the generals who set forth around the Peloponnese in 431 were listed with their colleagues and not with a *paredros*. The propriety of mentioning Potidaea in the superscription of line 2 is also questionable. But the text as a whole is a valuable complement to the historical discussion, and makes possible an easy understanding of the really brilliant argument.

BENJAMIN D. MERITT

UNIVERSITY OF MICHIGAN

THE ROMAN CAMPAGNA AND ITS TREASURES, by *Gilbert Bagnani*. Charles Scribner's Sons, New York, 1930. \$3.50.

This volume contains *multum in parvo* for the student or tourist in Rome who wishes to know the Campagna. The author has a scholar's knowledge of the topography, history and archaeology of his subject and has reaped the benefits of long association with the late Dr. Thomas Ashby, author of "The Roman Campagna in Classical Times," and Dott. Giuseppe Lugli whose book, "The Classical Monuments of Rome and its Vicinity," he translated into English.

Mr. Bagnani's own book contains, besides its 299 pages of text, notes with brief bibliography on each chapter, index, three outline maps and thirty-six beautiful illustrations. Chapters and sections are headed by quotations from Latin authors and Dante which give flavor to the whole.

The list of thirteen chapters shows how Mr. Bagnani conducts his reader out from Rome by each of the main ancient highways so that the Campagna is covered from Circeo and the Pomptine Marshes on the South through a swinging circle around to the Via Salaria on the North. Not only familiar trips like those to Hadrian's Villa and Tivoli, to Genzano and Nemi, to Frascati and Tusculum are described, but less known day jaunts such as one down the valley of the Sacco to Anagni and Alatri, or one north to Martial's Nomentum (Garibaldi's Mentana) and to the sites of Antemnae and Fidenae. And on familiar roads suggestions are made for side trips that the casual traveller might easily miss, for example to the Abbey of Grottaferrata near Frascati and the Palazzo Ginnetti-Lancellotti at Velletri beyond Lake Nemi. One of the most useful chapters for the classical student is the first, on "The Country of Virgil" with its clear direction for reaching Pratica di Mare, the ancient Lavinium, and the Acropolis of Ardea in the land of the Rutuli.

On every road not only classical sites and ruins are pointed out but mediaeval monasteries and renaissance palaces. Detailed information about where to get keys and *permessi*, even where to stop for lunch increase the practical usefulness of this modern guide-book while the learning arrayed in readable form between its covers makes it an invaluable and interesting companion for Campagna studies.

ELIZABETH HAZELTON HAIGHT  
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MITTELALTERLICHE GLÄSER UND STEINSCHNITT-ARBEITEN AUS DEM NAHEN OSTEN, by Carl Johan Lamm. 2 vols. I, pp. xii and 566, 10 plates, 6 in color; II, 205 plates. Verlag von Dietrich Reimer-Ernst Vohsen, Berlin, 1930. Rm. 160.

Since Schmoranz published his book on Old Oriental Gilt and Enamelled Glass Vessels (1899), no comprehensive work on the subject of the Islamic glass art has appeared. In the thirty years succeeding its issue much unenamelled glass formerly considered of Roman production

has been found to be of Arabic origin; many enamelled pieces not known to Schmoranz have made their appearance; and the knowledge and appreciation of Islamic glass has developed to extensive proportions. Meanwhile the collector and the student have had but scanty facilities for research except through extensive travel. Dr. Lamm's work is, therefore, most welcome, though it is a source of regret that he did not carry out his original intention of publishing it in English. Compensation for this loss is found in that it appears as Part V of *Forschungen zur islamischen Kunst* under the very able editorship of Dr. Friedrich Sarre, who has himself given much study to the subject of Islamic glass.

In the art of glass making the Islamic peoples were the direct heirs of the Romans. The latter had developed its manufacture to a very high degree both of technical and artistic excellence; although its production was carried on in practically all parts of the Empire, nowhere was it more extensive nor had it a more continuous history than in Syria and the Near East.

The Moslems succeeded naturally to this extensive business, held it to high standards, introduced new and peculiarly eastern shapes and decorative motifs, and in their gilt and enamelled ware attained a richness and beauty unsurpassed. While the making of hollow ware declined in Europe throughout the Middle Ages, it flourished as never before in the Near East.

This later phase of Islamic glass has attracted considerable study heretofore; but the earlier Islamic production has received but scant notice; and Dr. Lamm's volumes are the first that attempt any comprehensive treatment of the subject. His success is such that his work approaches a corpus of Islamic glass, although of course in so extensive a field it would be impossible, even if it were desirable, to include every known piece.

The author has attacked his problems in a most scholarly fashion. He has appended to his work an extensive, and it would seem complete, bibliography of the subject. His researches have been most exhaustive. The results are set forth in a straightforward way, greatly facilitating reference use.

The text, in addition to an excellent introduction, consists of an extended description of each of the pieces illustrated in the volume of plates. These are shown under three classifications, the unenamelled glass, crystal carvings, and gilt and enamelled glass. The descriptions of the pieces

in each group are preceded by a general discussion of the type of ware under consideration.

The first section, dealing with the unenamelled vessels, classifies them by style, including undecorated pieces, those ornamented by fluting, by applied threads and ribbons, by moulded (blown or pressed) decoration, and finally the cut and engraved pieces. These last lead naturally to the second section, on engraved crystal.

Over half of these plates are devoted to enamelled glass. Here the classification is by place of probable origin, Rakka, Fostat, Aleppo, and Damascus each claiming a goodly share of the production of this beautiful work. The final group, including a large number of Mosque lamps, is assembled under the heading of "Chinese Influence." I am not sure that I can see with Dr. Lamm the influence of China in all of these pieces. I have long thought in the case of some of them that they might possibly have been produced at Samarkand after Tamerlane sacked Damascus and removed its artisans to his own capital.

I must mention with a pride which I trust is pardonable that the Toledo Flagon has been reproduced in line drawing on the paper wrappers as well as in a full page plate.

BLAKE-MORE GODWIN

TOLEDO MUSEUM OF ART

#### DAS PROBLEM DES KLASSISCHEN UND DIE ANTIKE.

Acht Vorträge gehalten auf der Fachtagung der klassischen Altertumswissenschaft zu Naumburg 1930. Herausgegeben von Werner Jaeger. Leipzig und Berlin. B. G. Teubner, 1931.

Recently a revival of Humanism has taken place in Germany, due mostly to academic circles under the leadership of Werner Jaeger and Gerhart Rodenwaldt. The well-known and splendidly edited periodical, *Die Antike*, serves to introduce the new ideas to the public and a meeting held every two years gives opportunity of discussing the most important problems. Every meeting deals with a single problem only, thus allowing it to be treated exhaustively in an intimate and detailed discussion. So at the last one, the most urgent question of the New Humanism, the definition of the idea, "classical" and its application to the culture of Ancient Greece and Rome, was treated by the most prominent scholars of the present German generation.

After a summary by Jaeger, eight reports follow, presenting a fine symphony: the most bril-

liant and enthusiastic one, by Schadewaldt, is preceded and followed by profound, but sober philological analyses. Scholars of all fields, the philologists Stroux, Schadewaldt, Friedlaender and Fraenkel, the archaeologists Schweitzer and Schmidt, unite with the historian Gelzer and the philosopher Kuhn in elucidating the problem. Stroux and Gelzer bring forward the conceptions of the Ancients themselves about the classical writers, i.e., their ideal of the form of government. Schweitzer's deals with the definitions given by modern scholars. Friedlaender tries to find out the essence of the classical period by contrasting it with the pre- and postclassical ages, and Schmidt likewise, by showing the aims of the Hellenistic and Roman artists who imitated and copied the classical masterpieces. The classical period is analyzed by Schweitzer; Fraenkel treats mostly Vergil and Horace as the classical Roman poets, and Schadewaldt relies on Sophocles and Vergil in estimating the classical style.

All agree that "classical" is not merely an aesthetic conception, but of the highest ethical value, based on all spiritual powers capable of creating a most perfect civilization. All also tend to almost the same definition, which, perhaps, can be formulated in this way: the classical form has totality in contrast to the unclassical one, which gives only a part of the whole of life; but this totality is organized; it is *δικαιοσύνη* which gives the appropriate form and place to the individual forces restraining the gigantic and the monstrous; it has symmetry and proportion, simplicity and earnest monumentality; it is nature raised to an idealized level and an ethical *κόσμος*.

Schadewaldt maintains that the eternal efficiency of classical culture is sufficient proof that it should be regarded as the model and standard of European culture. Gelzer is more critical, believing that the Greek ideal of the state is of restricted value; Kuhn also thinks that the Greek performances are outrun by later history; nevertheless he and Schweitzer see the value of ancient culture in its creative power, and believe that it reveals true ideas of Europe and mankind. All these statements sound slightly dogmatic. It is to be regretted that all writers have confined themselves to the classical period without confronting it with non-European cultures or even Christianity, because the claim of the Ancients can be settled only by *Willensakt*, or by an all-comprising philosophy of the history of mankind as a whole.

VALENTIN MÜLLER

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ZUR TECHNIK DER ATTISCHEN GEFÄSSKERAMIK, von Ludwig Hussong. Inaugural-Dissertation (Universität zu Heidelberg). Buchdruckerei Jacob Lintz in Trier.

This doctor's thesis was originally intended to embrace the technique of all Greek ceramics, but was subsequently narrowed down to Athenian ware. Even so it occupies 74 closely printed pages with copious footnotes and fourteen illustrations—an eloquent testimony to the fascination and intricacy of the subject. The work is similar in plan and scope to my *Craft of Athenian Pottery*, that is, the various processes through which Athenian vases passed are described in the order of their manufacture. But it was conceived before the appearance of my *Craft* and its publication now is due, as the author explains, to two reasons: (1) it supplements in many instances my material and (2) in several important questions the author has come to conclusions different from those commonly held.

On most of the important points Dr. Hussong's findings agree with mine. For instance, of the three major revisions of current theories advanced in my *Craft* (pp. 107, 108) Hussong accepts (1) the use of "turning" as a regular process applied to the vases after they were thrown, (2) the application of a red ochre pigment (miltos) on the surface of the vases before the application of the glaze. But he rejects the third—that Athenian ware is once-fired. And he also disagrees in some minor matters.

Since Dr. Hussong's dissenting theories are presented with care and ability, and backed by considerable evidence, it is important to examine them in detail and to determine whether they should henceforth be adopted. (In this investigation I have had the invaluable help of the well-known potters, C. F. Binns and Maude Robinson, who have in all cases checked my evidence and have made several important contributions of their own.)

We shall begin with the important question of firing. Instead of the one fire postulated by Reichhold (Furtwängler u. Reichhold, *Griechische Vasenmalerei*, p. 152) and myself (*Craft*, pp. 37 ff.), Dr. Hussong takes the view that there were two fires—at least during the period from about 550 to 400 B.C.—the first to a temperature of about 600 degrees Centigrade previous to the glazing, the second to about 800 degrees Centigrade after the decoration was applied. The reason advanced for this theory is the desirability

of safer handling during the glazing; for Dr. Hussong believes that the vases represented as being decorated on the Caputi hydria (*Craft*, fig. 66) could not have been tilted on their feet in leather-hard condition without risk of injury, and so must have been at least soft-fired.

To deal first with Dr. Hussong's difficulty: It should be noted that on the Caputi hydria one of the vases is placed on a support evidently to prevent the strain from being borne by the edge of the foot. If the vase had been fired this precaution would not have been necessary. Furthermore, we must remember that the toughness of Athenian clay made the handling of the unfired ware much less hazardous than in most clays with which we are familiar; as I found by actual experiments with modern Greek clay presumably of a consistency similar to the ancient one. (The same explanation can be offered for such seemingly vulnerable shapes as Nikosthenes' amphorae which Hussong also uses as an argument for a second firing though he elsewhere claims that leather-hard vases are so strong that they may be lifted by their handles).

With regard to the positive evidence in favor of a single firing: One of my chief arguments against a second firing was (*Craft*, p. 40 f.) that the dents on numerous Athenian vases could not have occurred after the pots were fired, and since the marks of the objects which caused the dents go over the glaze the ware must have been decorated before firing. Dr. Hussong thinks such dents could have occurred also during a second fire; but the temperature at which the Greeks fired was not high enough to make the clay flexible during a second firing (C. F. Binns).

My second argument against a second firing was that the incised lines on black-figured ware must have been made while the clay was leather-hard, for their delicacy, swing, and smoothness could not have been attained by incision into hard, fired clay (*Craft*, p. 39). Dr. Hussong admits this (p. 58, fig. 14a), but claims that comparative smoothness is possible with incisions in unfired glaze applied on soft-fired ware and compares illustrations of the smooth, deep incisions in Corinthian ware (p. 58, fig. 17b) made, he holds, on the leather-hard clay, with the more ragged, shallower incisions in Athenian black-figured ware (fig. 14c and d). I do not think that the distinction shown in these two illustrations holds generally. Examinations of a large number of pieces of both wares indicate that the incisions



on Corinthian ware often have the same slightly ragged quality (due to cutting through the unfired glaze) as those on Athenian ware, and that they are if anything shallower. Hussong's "Platzrisse" (p. 39, fig. 11) (that is rifts or "crow's feet")—"typische Brandfehler des ersten Brandes"—are not mostly confined, as he claims, to earlier (Corinthian, etc.) ware, but are common also in Athenian red-figured vases (cf. e.g. vases 24.97.96, 10.210.14, 06.1021.185, 27.122.9 in the Metropolitan Museum). They cannot, therefore, be used as an argument for a second firing (p. 60). (They are due, as he states, to a more rapid shrinkage of the glaze than of the clay, but are not comparable, as he claims, to the modern crackle (p. 39) which is due to a variation of expansion and happens after the firing [C. F. Binns].)

Dr. Hussong's evidence for a second fire and his objections to a single fire are, therefore, in my opinion not valid.

To pass to the other, minor points of disagreement. On p. 33, Dr. Hussong accepts Reichhold's theory—opposed by me—that the round red or black and red spots found on the sides of Athenian vases are "Lagerringe," that is, due to supports on which the vases were put in the kiln in a horizontal position. But quite apart from my claim (*Craft*, p. 46) that vases so placed would be apt to warp, there is the important consideration that the "Lagerringe," coming into direct contact with the glaze, would of course *stick* to it and ruin the ware. It is because Athenian vases were placed in the kiln on their feet that the undersides of these feet are left unglazed either wholly or at least on those portions which actually touched the ground. The best explanation of the red and black spots therefore is not contact with supports but irregularity of fire.

The shapes of the turning tools which Dr. Hussong illustrates on p. 18 are misleading. It is not necessary or practicable to have them correspond to the desired profiles, since the latter can be more easily obtained by the manipulation of a few standard shapes (see Binns, *The Potter's Craft* (1922), p. 100, fig. 19). Dr. Hussong's doubt that a vase can be polished in a few minutes (p. 20) is due to his confusion of my term polishing (*Craft*, p. 19) with the German word *Glättung*. The polish is applied *after* the vase has been smoothed or "turned" with the metal tools. Naturally this "turning" or *Glättung* takes considerable time, but the subsequent polishing is an easy matter.

Mr. O. Tonks (*A.J.A.* 1908, pp. 420 ff.) made the suggestion—that since Athenian pottery was fired to a temperature of about 960 degrees Centigrade and the melting points of silver and gold are respectively 950 degrees and 1065 degrees, these metals were used to regulate the heat of the kiln in the same way that modern potters use Seger cones. Though potters I have consulted (Maude Robinson and C. F. Binns) think this method improbable (since firings were judged by the color of the burn previous to the invention of heat-recording cones by Seger), Hussong's objection (p. 41) that silver and gold are too precious for such use is not valid. A small silver wire set up half an inch long is sufficient for the purpose and, after melting, it can be reused (C. F. Binns). Moreover, silver from the Laurion mines was easily accessible. And there was no necessity of losing the gold—if it was used at all—since its melting point was not reached in the firing. (The difference in the temperatures for the firing of Athenian vases postulated by Hussong (800 degrees) on the one hand and Tonks and Binns (950 degrees) on the other, remains unexplained.)

Dr. Hussong is evidently not aware (pp. 45–46) of the important article by C. F. Binns and A. D. Fraser (*A.J.A.* XXXIII (1929), no. 1) on the constitution of black glaze attributing the black color to reduction in the kiln.

Though Dr. Hussong accepts the theory that the red ochre (miltos) was regularly applied on the leather-hard clay before the glazing, he cites a few exceptions (pp. 23–24), for instance when the whole vase was glazed except under the handles. Here it is, of course, a matter of indifference whether the red ochre was applied before or after the glazing; for only the small reserved places under the handles had to be reddened and there was no danger of rubbing off the delicate glaze lines by the subsequent red ochre wash. There are cases, however, where red is visible under the black covering glaze (where the latter has become disintegrated)—showing that the application over the whole surface was frequent. The slight gloss noticeable on portions of this red is best explained as due to contact with the black glaze, for it is not bright enough for the red to be interpreted as glaze (C. F. Binns). A possible reason for its use over the whole surface even when covered by the glaze is the richer effect such an undercoating would give to the black. This red under the glaze must not be confused with the

glaze turned red in the fire, which is on the same level with, not underneath the black glaze. Dr. Hussong also doubts the validity of the evidence of an Athenian amphora cited by me (*Craft*, p. 57, fig. 56) where a glazed line goes over the red ochre left in the groove of the preliminary sketch line, for he claims that the red ochre would have stayed in the preliminary sketch line also after glazing. I shall therefore give a more convincing example—the krater no. 06.1021.152 in the Metropolitan Museum—where the red ochre in the preliminary sketch lines is actually visible *under* the diluted glaze lines, which here are particularly thin and transparent.

Very interesting are the illustrations of relief lines on red-figured Attic ware (p. 51, fig. 13), enlarged 6 to 12 times. Dr. Hussong favors (p. 52) the single bristle as the instrument, in spite of the obvious difficulty that such a bristle would not carry enough glaze for the long-drawn-out lines so frequent on Athenian vases. Such theories can only be substantiated by actual experiments.

I have confined myself in this review to examining those views in which Dr. Hussong disagrees with statements in my *Craft*, since these seemed to call for special notice. But they take a minor place in the work as a whole—which is an important contribution to a difficult subject, with many excellent observations—such as that the signature *ερωτοειν* must be that of the potter, not of the factory owner, for if it were the mark of an atelier we should expect it on all the better pieces, not only on a few (p. 55). It is to be hoped that Dr. Hussong will carry out his intention and continue his researches into other branches of Greek ceramics.

GISELA M. A. RICHTER

THE METROPOLITAN MUSEUM OF ART

HISTORY AND MONUMENTS OF UR, by C. J. Gadd.

Pp. xv+269, pls. 32. E. P. Dutton and Company, New York, 1929.

All that our fathers knew about Sumeria, Babylonia and Assyria could be included within the two covers of one book. Now a single city in but one of these lands furnishes material for a whole volume.

Though not as ancient as Eridu—the earliest of all cities—Ur began its historical life at the beginning of the third millennium B.C. and continued in existence for more than 2,500 years. The Moon-god cult which flourished in it made it

an important center. As the traditional birthplace of Abraham, its name in the form "Ur of the Chaldees" has been remembered throughout the ages, but the very site of the city was lost to the knowledge of man until the middle of the last century. Mr. Gadd, of the department of Egyptian and Assyrian antiquities in the British Museum, bases his scholarly and interesting account upon the recent excavations and other available sources. Starting with the prehistoric era he follows his threads through the brilliant Sumerian period and later Semitic kingdoms down to the virtual end of the local history of the town after the Persian conquest of Babylonia in the latter part of the sixth century B.C. The spouted vase of painted earthenware (pl. III, facing p. 20) is reminiscent of the *ibriq* still used in Mt. Lebanon for drinking purposes; and the gold dagger with its elaborate sheath (pl. VII, facing p. 34) might be taken for a modern one offered for sale in the bazaars of Damascus.

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L'ART NÈGRE A L'EXPOSITION DU PALAIS DES BEAUX-ARTS DU 15 NOVEMBRE AU 31 DÉCEMBRE 1930, par J. Maes et H. Lavachery. Les éditions Van Oest Bruxelles-Paris, 1930. 30 frs.

This book was evidently designed as a souvenir and illustrated supplement of the catalogue of the Brussels exhibition of 1930. It contains 48 pages of plates, well chosen with examples from the whole of Negro Africa in the various materials employed. The rather meagre text is in two sections; the first part relating to the Belgian Congo by Maes, the Conservateur of the Tervueren Museum, the second dealing with non-Belgian Africa by Lavachery. Although the book has no scholastic pretense, it is unfortunate that the references to specific objects are by catalogue numbers and not by the numbers of the plates illustrated. The text in itself is not self-sustaining and would hardly serve as an introduction to the subject, the second part in particular being little more than a mention of various parallels of latitude. The author modestly concludes that we do not yet know enough about the different tribes to venture on any firm coördinating conception of African art.

The first section is, however, more fruitful, since it indicates the progress of the study of African art from the early exclusively ethnographical publications through the hyper-aesthetical treatment connected with the last manifesta-

tions of eclecticism in post-war art to a status in the present day of a more enlightened analysis of the works of art for themselves. It would be ridiculous to overlook the powerful effect of primitive, especially negro art, on Western Europe in recent times, but, as M. Maes points out, this inspirational value for us does not take into account the whole beauty of Congo sculpture: "Pour comprendre la profonde beauté de l'art nègre en général et de la sculpture des Congolais en particulier, il faut avant tout bien situer l'objet dans la vie indigène, dévoiler sa signification personnelle, percer le velum qui cache le pourquoi de l'oeuvre réalisée par l'artiste indigène. Vouloir séparer l'objet de sa signification sociale, négliger son rôle ethnique pour n'y voir, n'y admirer et n'y chercher que le côté esthétique, c'est lui enlever son sens, sa signification et son raison d'être."

This section is also valuable in clarifying the principles of artistic creation employed by the Africans—so at variance with the western practice of generalizing from the total form to be represented. The negro artist selects certain dominant, to him deeply moving traits which he in turn emphasizes at the expense of any aspect of proportion and structure in the object, so that the resulting figure, never taken from an actual model, receives the full force of his creative feeling and imagining. His power to transmit this feeling to us causes us to recognize a work of art in an object which is itself contrary to all our canons of physical beauty in proportion and structure.

This striking, fundamental difference in artistic creation is doubly helpful to us for removing the last grounds of emulation—the defeatist academy of artistic enterprise—and for simultaneously enriching us with a new horizon in the appreciation of beauty, since not to copy, but to understand negro art is to master a foreign beauty.

AGNES RINDGE

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DIE APOKALYPSE DES HL. JOHANNES IN DER ALTSPANISCHEN UND ALTCHRISTLICHEN BIBEL-ILLUSTRATION: DAS PROBLEM DER BEATUS-HANDSCHRIFTEN (Spanische Forschungen der Görresgesellschaft, herausgegeben von ihrem Spanischen Kuratorium: 2<sup>o</sup> Reihe, 2. & 3. Bd.), by Wilhelm Neuss. 2 vols. Münster i/Westfalen, Aschendorfsche Buchhandlung, 1931.

Neuss' seven chapters (not including a résumé in Spanish at the end of the book) deal with the

following divisions of his subject: I, the content and composition of the Commentary on the Apocalypse written by Beatus at Liebana in the Asturias in the latter part of the eighth century, and a description and analysis of each of the twenty-seven manuscripts that have preserved to us this commentary in illustrated form; II, the establishment of the *stemma* or descent of the manuscripts, both on the basis of the illustrations and of the text; III, an exegesis of the miniatures; IV, a discussion of the illustration of Jerome's Commentary on Daniel which is found as an additional feature of most of the Beatus-manuscripts; V, a reconstruction of the archetypal illustration of the work; VI, a discussion of the significance of the illustrated Beatus of the Berlin Staatsbibliothek, which leads to the isolation of an Italian and a Gallic type of Apocalypse-illustration which is to be distinguished from the Spanish version represented in the Beatus; VII, a résumé of the data and conclusions gained in the whole monograph, with observations on the significance of the Beatus-cycle for the history of mediaeval art. Indices *nominum* and *rerum* are appended to the book.

The author of *Das Buch Ezechiel in Theologie und Kunst*, and *Die Katalanische Bibelillustration* has taught us to expect from him a thorough and reliable handling of any theme he undertakes, and his readers will not be disappointed in the present work. The discussion of the individual manuscripts is to a great extent a critical weighing of evidence already known, but the analysis thereof is cautious and convincing. The Beatus of the Pierpont Morgan Library maintains its position at the head of the series chronologically, though it is moved down to c. 950 from Lowe's dating of 894, this discussion being accompanied by a brief but good summary of the criteria for dating Visigothic script. With reference to T (Archivo Histórico Nacional, Madrid; A.D. 970) Neuss leaves open the question of the identity of its first illustrator with the *Magius* of the Morgan Beatus. On the other hand, the Beatus of Gerona was illustrated by the *Emeterius* who finished T, assisted by the nun *Ende* in some double cloister probably in Catalonia, in 975. Hh 58 of the Biblioteca Nacional in Madrid (A<sup>1</sup>) is identified with the Beatus from S. Millan de la Cogolla mentioned by Flórez and dated on palaeographical grounds c. 920-30. The Beatus & II 5 of the Escorial, dating from the end of the tenth century, is probably from the cathedral

library of Oviedo. The modification of the original Mozarabic style of the traditional illustration, under influence from the north, is first seen in the *Beatus of Urgell* in the tenth century, of origin probably in Aragon or Navarre. The *Beatus of Facundus* from S. Isidoro in León (B31), in the Biblioteca Nacional, Madrid, was written in 1047 for the royal library of Ferdinand the Great of Castile and his queen Sancia of León. The *Beatus of St. Sever* (lat. 8878, Bibliothèque Nationale, Paris), which emerges from Neuss' book as the best representative of the archetype, was illustrated probably by a Spaniard who signed himself on the shaft of a colonnette on fol. 6 as *Stephanus Garsia Placidus*.

Neuss rejects the theories of Delisle and Sanders of two or more editions of the Commentary from the hand of *Beatus* himself, and traces the cycle to a single archetype, which included the genealogical tables and the Evangelists; the scenes of Christ's Life and of Heaven and Hell were later additions. In the *Beatus of Turin* the Life of Jesus takes the form of strip-pictures evidently copied from a rotulus, and a Latin one at that, inasmuch as the labels show that the model was not Greek. Neuss' treatment of the pictures of the Evangelists (pp. 116 ff.) misses the significance of the plain nimbus given to the seated figure in the more faithful representatives of the tradition, in view of the results of the investigation of the portraits of the Evangelists in Greek and Latin gospel-books which is being made by A. M. Friend, since the latter points out that the combination of seated and standing figure is demonstrably a representation, in the original, of the Evangelist and his secretary, which would account for the plain nimbus given the seated Evangelist with complete propriety, whereas it is a solecism if meant to mark the figure as the Saviour. This is not to say that the artists did not interpret the seated figure as Christ, as shown by the crossed nimbus which replaces the plain one in such manuscripts as the *Morgan Beatus* and that of the John Rylands library at Manchester.

A number of small points appear to the reviewer to suggest correction. One wonders, for example, in view of the Coptic element in the *Beatus*-illustration that is freely admitted elsewhere (for example, in the relating of the unique scenes of the Infancy of Jesus in the *Turin Beatus* to a Coptic source) why the world-maps of the *Cosmas Indicopleustes* were not summoned for comparison with those of the *Beatus*-manuscripts.

The author accepts Cook's explanation of the globe-mandorla as the combination of the Latin globe as the throne of Christ with the Eastern aureole, without canvassing the apparently more plausible combination of the mandorla with the *arcus coeli* current in East Christian art as the seat of Christ from the seventh century. The "vorkarolingisches Evangeliar in Angers" of p. 245, note 1, if it refers to Angers no. 20, is misdated certainly so far as concerns the miniature of the Crucifixion which Neuss cites, both on style, and because the iconography thereof indicates a use of East Christian types which cannot be verified before the ninth century. The origin of the *Beatus*-cycle may be properly traced to North Africa and indeed Neuss gives excellent reason for such an hypothesis, so much so that one wishes, in his introduction of the undeniable stylistic affinity of the Ashburnham Pentateuch in support of this provenance, he had not adduced as convincing evidence of North African invention of the Pentateuch's illustrations, the very unconvincing parallels drawn by Dom Quentin between the mountains of the Pentateuch landscapes and the profile of Atlas, and between the lions of the Ark and those of North Africa!

The illustrations of the Commentary go back to an illustrated Apocalypse which must have been as late in date as the fifth-sixth century, and earlier than the Pentateuch (seventh), since it had, as compared with this, a better sense of the pictured page as an ensemble. The archetype must have been the work of a Latin artist, not a Greek; the Coptic reminiscences are explained by Neuss as transmitted through North Africa, or through the influence of a considerable Coptic element in Spain itself. He even admits the possibility of Coptic collaboration in the illustration of the *Beatus of Gerona*. The illustrations to the Daniel commentary were copied from an illustrated Bible that was derived from the same archetype which furnished some of its illustrations to the Bible of León of A.D. 960,—an archetype certainly of Visigothic date.

One of the most important contributions of the book is furnished by the chapter on the Berlin *Beatus* and its implications. This manuscript took its pictures from an illustrated Apocalypse which belonged to the same tradition as the miniatures of the Bamberg Apocalypse, of the Book of Revelation in the Roda Bible, of the Apocalypse in the Bibliothèque Nationale (Nouv. Acq. lat. 1132), and of the Apocalypse of Valen-



ciennes. This group represents a tradition of Apocalypse-illustration which stems from Italy. The illustrated Apocalypses of Trèves and Cambrai, on the other hand, represent a Gallic group. The contrast between these three versions of the same content is aptly characterized by the author: the Italian he calls "ruhig-vornehm," the Gallic is "narrative, simple, weak," while the Spanish alone is "temperamental and dynamic."

This last quality is indeed the essentially Spanish virtue which is found no less in these early crude efforts of obscure monastic illuminators than in the finished accomplishment of Pedro de Mena and Goya; it is, says Neuss, the ability to render the awful, the pathetic, and the tragic of Scripture as something experienced. The art of the Beatus manuscripts, or at least the archetypal art which they reflect, is related by our author to the general late antique style, which he sums up in excellent wise, in contrast to the Hellenistic style from which it comes, as having sacrificed plastic independence to pattern, balance and unity to expression, and visual to intellectual reality. "Man malt nicht mehr wie man sieht, sondern wie man denkt." But in his attempt to explain the geometrical convention and primitive composition of the Beatus pictures he forgets that the trend or return toward simplification brings any style ultimately to the limited vocabulary of primitive art in general. It is dangerous therefore to assume, because of resemblance between the motifs of the Beatus-illumination and those of recent finds belonging to the pre-historic art of Spain, that the latter has survived in the Beatus-manuscripts, or to draw similar conclusions with reference to a putative Celtic strain in the Beatus-art because of identities with the ornament of Irish manuscripts. The author is on firmer ground in proving that the Beatus-cycle is a specifically Spanish, and entirely Latin, phenomenon, if only by reason of the suspicion with which the Apocalypse was regarded by the Eastern Church. The Syriac Peshitto text of the New Testament omitted the book altogether, and there was no Greek commentary on it until the sixth century. In the West, on the other hand, there is a continuous line of commentations from Victorinus of Pettau (c. 300) to Joachim of Floris at the end of the twelfth century. Beatus himself has preserved a Donatist commentary by Tyconius in his own adaptation thereof, and the labels in his pictures are Old Latin rather than Vulgate in their affilia-

tions of text, agreeing moreover with the African branch of Old Latin Gospel-texts rather than with the Italian.

The genealogical tree of the Beatus-manuscripts divides into two groups. The first group descends directly from the eighth-century models which still retained some vestige of Latin naturalism, but shows in general its helplessness before them; "es fehlte die karolingische Renaissance" . . . "die antike Tradition er stirbt in Spanien." The Beatus of St. Sever in this group, illustrated north of the Pyrenees, differentiates itself in just this respect of being able to understand, through its French heritage of the Carolingian renaissance of the antique, the Hellenistic forms that still survived in the Spanish model which it followed, and to give them a vicarious revival. But its congeners in Spain show a helplessness before the same sort of models that descends into the starkest sort of simplification of design. Group II, on the other hand, has for immediate ancestor a Mozarabic transformation of the original which explains on the one hand the strong affinities its members show at times with Islamic art and its Persian-Sassanid sources, and on the other the iconographic and stylistic unity of the group which contrasts with the greater variety of Group I,—the Mozarabic sub-archetype furnished an easier model for faithful copying by artists who recognized in it, as they could not have recognized in its more Latin parent, an artistic language which was their own.

Mediaevalists are in the debt of Dr. Neuss for a thoroughly adequate treatment of one of the most difficult phases of mediaeval art.

C. R. MOREY

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BETH-SHAN EXCAVATIONS 1921-1923; THE ARAB AND BYZANTINE LEVELS, by *Gerald M. Fitz Gerald*. Publications of the Palestine Section of the Museum of the University of Pennsylvania, volume III. Pp. xi+64, with 42 plates and 2 plans. The University Press, Philadelphia, 1931. \$15.00.

In this account of the excavations under the direction of Dr. Clarence S. Fisher, the author, who was for one season on the staff, discusses in nine brief chapters the site of the ancient town and the course of work pursued; the Arab levels on the summit; the Byzantine round church and other remains; the Arab, Byzantine, Hellenistic and Roman pottery found; and the lamps, metal,



glass, stone, ivory and bone objects, and coins unearthed. The Greek and Arabic inscriptions are transcribed and translated. The whole work is done in a most scholarly and excellent way. But, unfortunately, a couple of minor errors have been made in transcribing the Arabic graffiti (p. 48, word 8; p. 50, no. 11, w. 1; p. 51, no. 13, w. 1); one Arabic word, *ibn* (p. 48, no. 1 after the fifth word), has been omitted; one word, "Amen" (p. 50, no. 11), was left out of the English translation; and a verse from the Holy Koran (p. 50) was misquoted—a sacrilege!

PHILIP K. HITT

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THE FOUNDATIONS OF BIBLE HISTORY. JOSHUA, JUDGES, by *John Garstang*. Pp. xxiv+423; pls. 73, maps 19, figs. 14, plans 12. Constable & Co., Ltd., 1931. 20 sh.

A personal re-examination, after many years of previous excavations and study, of many sites in Palestine, especially those of Jericho, Ai, and Hazor, has led the author to say: "These old portions of the Books of Joshua and Judges contain the core of the historical narrative, and are relatively free from discrepancies, giving a straightforward and fairly continuous account of the sequence of events." With the help of recent archaeological discoveries, with photographs, and other scientific materials, the author has pieced together threads of evidence that will astonish, as he himself admits, many readers.

The introduction gives, and analyzes, the text, according to J and E, of pertinent parts of Joshua and Judges. The book is divided into twenty sections under four main heads: I. The Historical Background; II. Campaigns led by Joshua; III. The Settlement of the Tribes; IV. The Tribes under the Judges. At the end are the usual chronological outlines, an archaeological, and a general, index.

After a topographical chapter on Palestine, reinforced by excellent maps and photographs, and the identification of the symbol of Lower Egypt as the agency by which the Canaanites, *et al.*, were weakened (*i.e.* "I sent the Hornet before you which drove them out"—Joshua XXIV, 12), the author sets the date of Joshua's invasion of Canaan at about 1407 B.C., by a detailed and convincing array of evidence. The references to several land-slides which stopped up the Jordan temporarily explain how the Israelites crossed it on dry land; the fall of Jericho, from archaeologi-

cal evidence in the walls, points to 1400 B.C., and there seems to be proof that the double walls not only were topheavy and badly foundationed, but also that there was some undermining done.

The campaign which ended by the taking of Ai, which is only thirteen miles from Jericho; the proof of the alliance of the Israelites with the Hivites of Gibeon; the defeat of a Southern League of which Jerusalem and Hebron were two of the strongest members, with the help of the five kings of the Amorites; the campaign against Hazor and the Northern League, and an identification of the Waters of Merom; all these are told and documented in masterly style. The settlement of the Tribes does not present much that is new, but it is a succinct account. Beginning with section 15 the author gives a chronological account of the various oppressions and deliverances, which he combines with parallel Egyptian records, and the troubles with the Philistines, all pointing along the way Israel took in their search for a leader.

The appendix containing place names and the bibliography on archaeologically identified sites (pp. 351-404) is of particular value to the historian and archaeologist. The book is a monument to a man of parts, who is at once an archaeologist, an historian, and a Biblical scholar.

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THE HITTITE EMPIRE: BEING A SURVEY OF THE HISTORY, GEOGRAPHY, AND MONUMENTS OF HITTITE ASIA MINOR AND SYRIA, by *John Garstang*. Pp. xvii+364, pls. 53, ills. 45, plans 3, maps 12. Richard R. Smith, Inc., 1929.

The work of A. H. Sayce since 1888, of Winckler's recovery of the Hittite libraries at Boghaz-Keui in 1906-1907, and of Hrozný's demonstration, beginning in 1915, of the Indo-European affinities of the official language of the Hittites, have made necessary, indeed inevitable, a new general history of the Hittites. It is fortunate that this work has been done by Sayce's brilliant pupil Garstang, who for so many years was Director of the British School of Archaeology in Jerusalem.

The first four of the ten chapters of the book are devoted to an historical and topographical survey. Chapter V is a description of the capital of the Hatti, Hattusas (Boghaz-Keui); chapters VI and VII deal with the monuments in Asia Minor; VIII deals with Taurus and Anti-Taurus; IX with the three North Syrian cities of Sinjerli,

Sakje-Geuzi, and Carchemish; and X with Syria and its monuments. There are four indices, the first being a chronological historical outline, the second a very complete list of monuments with selected bibliography, the third an index of authors quoted, and the last a general index. The maps, plans, and illustrations are well chosen and clear, and leave little to be desired.

The author makes clear why Marash was so important as a key to Syria. He seems not to accept the suggestion that the Muski of the Assyrian texts are the Moschi of Herodotus (III, 94 and VII, 78); he thinks the Phrygians inherited the prestige of the Hittites, over whom they held chief sway during centuries IX and VIII B.C., before they in turn were overrun by the Cimmerians. Hattusas, founded toward the end of the third millennium B.C., admittedly the Greek Pteria, is excellently described, and its strategic position explained. Garstang offers as a tentative chronology the following:

- B.C. 1400 Upper city fortified—time of Sub-biluliuma
- 1330 Fortifications strengthened—time of Mursil
- 1275 Sculptures of Iasily Kaya—time of Hattusil
- 1250 Decorated gateways (Amazon and lions)
- 1240 Lower Palace and Archives—time of Dudhalia
- 1200 Fall of Hattusas
- 1000 Lower Palace reconstructed (Pteria?)

The author suggests with scholastic modesty that many of his conclusions are tentative, and that later excavations are likely to modify or change them. He has taken into account, however, everything that has been done thus far on the Hittites, and has written an authoritative and critical book.

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## ABBREVIATIONS

The following abbreviations of the titles of periodicals will be used in the *JOURNAL*, other titles being uniformly abbreviated (*cf. A.J.A.*, 1925, pp. 115-6):

- A.J.A.*: American Journal of Archaeology.  
*A. J. Num.*: American Journal of Numismatics.  
*A. J. Sem. Lang.*: American Journal of Semitic Languages and Literature.  
*Ant. Denk.*: Antike Denkmäler.  
*Ann. Scuol. It. At.*: Annuario della r. Scuola Archeologica di Atene e delle Missioni Italiane in Oriente.  
*Arch. Anz.*: Archäologischer Anzeiger.  
*Arch. Eph.*: 'Αρχαιολογικὴ Ἐφημερίς  
*Ath. Mitt.*: Mitteilungen d. k. d. Archäol. Instituts, Athen. Abt.  
*Boll. Arte*: Bollettino d'Arte.  
*B.S.A.*: Annual of the British School at Athens.  
*B.S.R.*: Papers of the British School at Rome.  
*B.C.H.*: Bulletin de Correspondance Hellénique.  
*B. Metr. Mus.*: Bulletin of the Metropolitan Museum of Art, New York.  
*B. Mus. F. A.*: Museum of Fine Arts Bulletin, Boston.  
*B. Com. Rom.*: Bulletino d. Commissione Archeologica Comunale di Roma.  
*Byz. Z.*: Byzantinische Zeitschrift.  
*C. R. Acad. Insc.*: Comptes Rendus de l'Académie des Inscriptions et Belles-Lettres.  
*C.I.A.*: Corpus Inscriptionum Atticarum.  
*C.I.G.*: Corpus Inscriptionum Graecarum.  
*C.I.L.*: Corpus Inscriptionum Latinarum.  
*Gaz. B.-A.*: Gazette des Beaux-Arts.  
*I.G.*: Inscriptiones Graecae.  
*Jb. Arch. I.*: Jahrbuch, d. k. d. Archäol. Instituts.  
*Jh. Oest. Arch. I.*: Jahreshefte des oesterreichischen Archäologischen Instituts.  
*J.A.O.S.*: Journal of the American Oriental Society.  
*M. Am. Acad. Rome*: Memoirs of the American Academy in Rome.  
*M. Soc. Ant. Fr.*: Mémoires de la Société des Antiquaires de France.  
*Mitt. Or. Ges.*: Mitteilungen der deutschen Orient-Gesellschaft.  
*Mon. Ant.*: Monumenti Antichi (of Accad. d. Lincei).  
*Mon. Piot*: Monuments et Mémoires pub. par l'Acad. des Inscriptions, etc. (Fondation Piot).  
*Mün. Jb. Bild. K.*: Münchner Jahrbuch der bildenden Kunst.  
*Mus. J.*: The Museum Journal of the University of Pennsylvania.  
*Not. Scav.*: Notizie degli Scavi di Antichità.  
*R. Arch.*: Revue Archéologique.  
*R. Art. Anc. Mod.*: Revue de l'Art ancien et moderne.  
*R. Ép.*: Revue Épigraphique.  
*R. Ét. Anc.*: Revue des Études Anciennes.  
*R. Ét. Gr.*: Revue des Études Grecques.  
*Rh. Mus.*: Rheinisches Museum für Philologie, Neue Folge.  
*Röm. Mitt.*: Mitteilungen d. k. d. Archäol. Instituts, Röm. Abt.  
*Röm. Quart.*: Römische Quartalschrift für christliche Altertumskunde und für Kirchengeschichte.



PLATE I.—MOSAIC IN HOUSE 26, OLYNTHOS. BELLEROPHON SLAYING THE CHIMAERA



PLATE II.—MOSAIC FROM HOUSE 26, OLYNTHOS. GRIFFINS RENDING A HORNED STAG



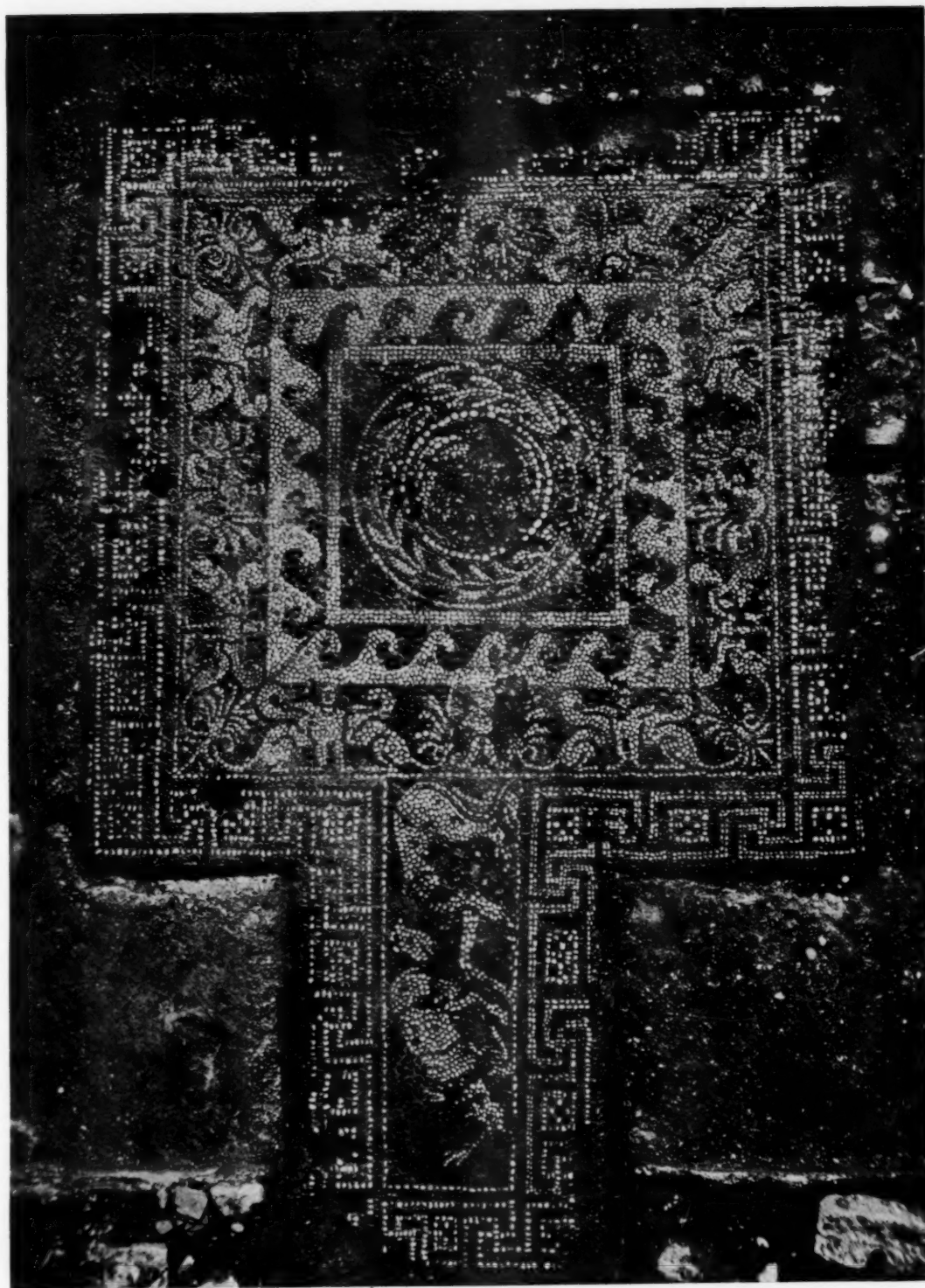


PLATE III.—MOSAIC FROM OLYNTHOS, HOUSE 100. LION ATTACKING A STAG. DOUBLE-BODIED SPHINXES AND SEA DIVINITIES

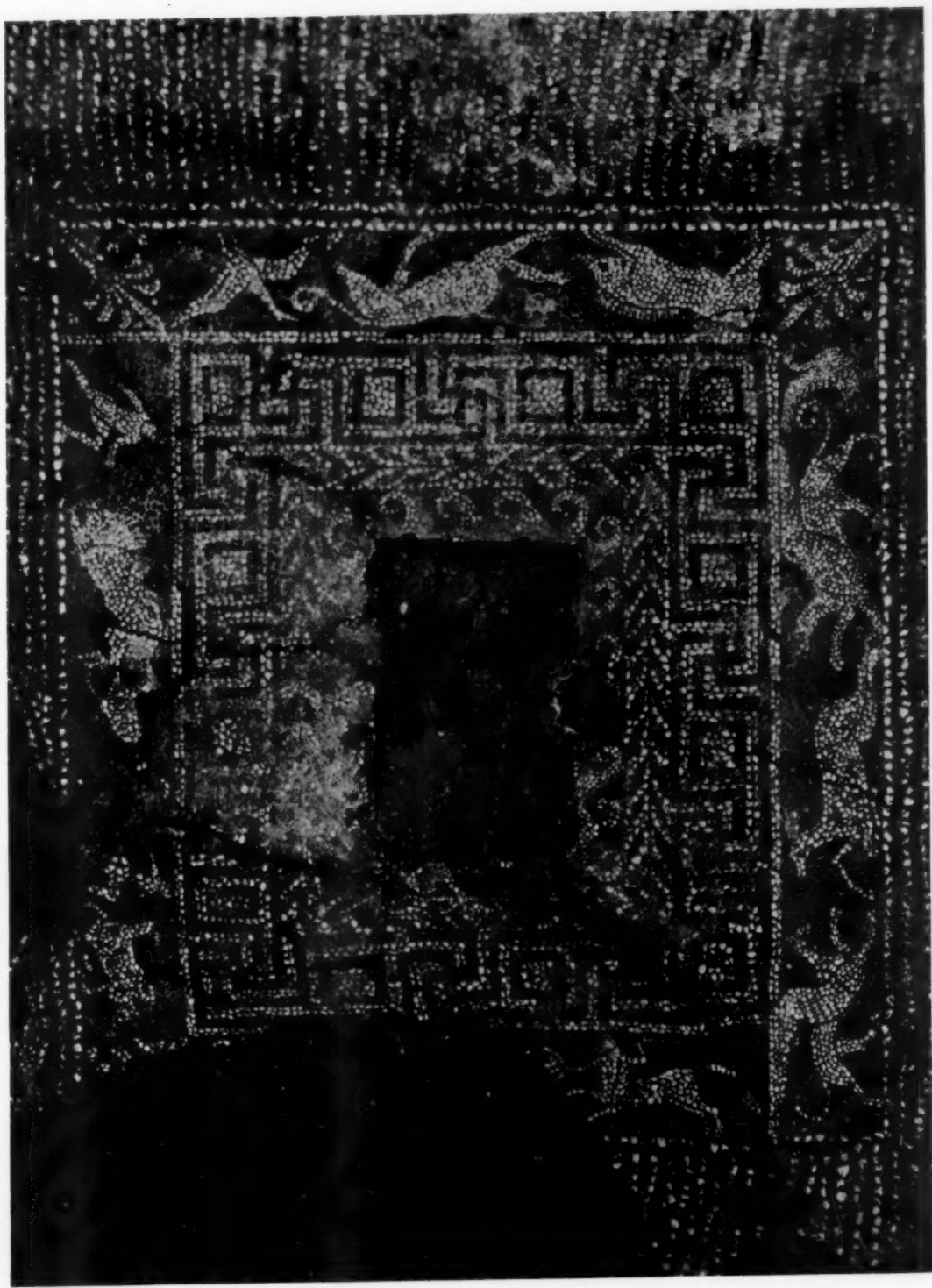


PLATE IV.—MOSAIC FROM OLYNTHOS; CENTAUR AND LAPITH; GRIFFINS ATTACKING DEER; LION AND BOAR; HUNTER